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The Role of Architectural Ceramics in Contemporary Site- Specific Art

**An Analysis from the Perspective of the Art Practitioner through
Four Case Studies of Commissioned Artworks**

Eleanor Teresa Wheeler MA

**A thesis submitted in partial fulfilment of the requirements of
The University of Northumbria
for the degree of Doctor of Philosophy**

**In collaboration with Winskell Chartered Architects, Newcastle
upon Tyne and Northern Arts**

March 1996

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ABSTRACT

The purpose of this study was to investigate the application of architectural ceramics within contemporary site-specific art projects and architectural contexts.

The research involved the adoption of appropriate research methodologies and was practice-led involving the participation of the researcher in four site-specific art projects. These formed the basis of Case Studies which followed a structure based on the actual commissioning process.

The subsequent comparison and reflection on these projects highlighted key issues relating to the process of producing large scale ceramic artwork for public places and within a collaborative context.

It was found that ceramic, and particularly brick was an appropriate material for the embellishment of contemporary architecture and that its application was most effective when included as an integral feature of the building. This was best achieved through close collaboration between artist and architect at the earliest stages of the building programme.

The research demonstrates the viability of ceramics for large scale architectural features and also offers an alternative perspective to previous theory based studies of site-specific art. In addition it indicates possible ways forward for architectural ceramics through closer cooperation with industry, architects and the application of new technology.

SECTION ONE: INTRODUCTION

1.1 OVERVIEW OF SECTION 1

This thesis accompanies an exhibition of ceramic and brick sculpture and visual documentation of four commissioned sited ceramic artworks (Case Studies) and is intended to support the practical work. Whilst being a written documentation of the processes involved in the commissioning, design and making of the sited artwork, it also serves to contextualise the artist/researcher's practice.

1.1.1 Rationale for the research

Since The 1980s interest in Public Art has grown, becoming an agenda not only for artists and architects but for politicians, planners and the recipients of the artwork- the public. In 1988 the Arts Council of Great Britain implemented its *Percent for Art* policy in response to a need for structured funding for artists working within the public domain and to encourage architects and planners to consider the inclusion of artwork within urban regeneration and new building schemes from the outset. The revival of ornament in architecture and the collaboration between artists and architects has been explored extensively by critics and theorists (e.g. Miles, 1989; Selwood, 1989; Dormer, 1988), with *Percent for Art* being hailed as the best means to ensure successful collaboration and adequate funding. *Percent for Art*, along with the role of art in public places, is currently being reappraised by these same critics (amongst others) reflecting on the successes and failures of art in architecture projects since its implementation.

* "The makers primary intention is to utilise their skills and knowledge of materials in order to collaborate with other professionals- manufacturers, architects, interior designers, theatre set and costume designers"

This research project evolved out of a perceived need for public/site-specific art to be examined from the perspective of the art practitioner, as opposed to that of theorists and critics. Similarly, whilst this area has been addressed in relation to fine art sculpture practices, there has been minimal examination of the role of the applied arts ("Interface activities", Johnson, 1995)*

in relation to contemporary site-specific art. This suggested there was a need for a material such as ceramic (historically used extensively in integrated architectural ornament and sculpture) to be reappraised as a suitable medium for contemporary site-specific artwork.

Within the broader context of the crafts, there is currently debate as to whether 'craft practice' should even be analysed within an academic framework. On the one hand Dormer, whilst agreeing that it is important for the practitioner to understand the nature of their practice, voices concern that "theory would sidestep practice" (Johnson, 1995). On the other, Johnson argues that there is a need now for makers to engage with "wider cultural debates", to prevent their practice becoming insular and consumer led.

"A theorised overview of craft practices will raise the debate within the academy, validating and positioning the area of study alongside other art disciplines."

(Johnson, 1995)

The continuation of the artist/researcher's practice and specialisation in ceramics was central to the research project, and was used as the means to explore the application of architectural ceramics within the contextual framework of current Public Art funding policies, the revival of embellishment in architecture and the historical use of architectural ceramics. In this way the practice of producing site-specific ceramic and brick sculpture was examined, not from a purely theoretical or observational perspective, but through direct participation in the commissioning process, and subsequent reflection on this process. The artist/researcher had no previous experience of carrying out very large scale work or site-specific art commissions, bringing a different perspective (and possibly fewer preconceptions) to the project to that of a more experienced practitioner.

1.2 Hypothesis

The hypothesis at the core of this research is that ceramic ornament, or ceramic sculptural features, can significantly improve and enhance contemporary built environments. Ceramic provides a versatile medium for the production of highly decorative and functional details and is as appropriate for contemporary contexts as in the past. The introduction of such detail is best achieved through collaboration between artist and architect, designing the artwork as an integral feature within the building scheme

1.3 Aims and objectives

The aim of this research was to demonstrate the importance and potential of ceramic as a medium for embellishment in contemporary architecture and the value of collaboration in achieving the successful integration of art into architecture.

It was concluded that this would be best achieved through the creation of a body of work (including extensive documentation of commissions for sited artwork), forming the basis of four case studies; an exhibition of ceramic and brick sculpture, representing typically the researcher's art practice; and a written supporting thesis incorporating a review of historical and contemporary work in order to place the practical work within context. This should demonstrate from the practitioner's viewpoint and experience the process of producing artwork for architecture, the collaborative and commissioning process and the relationship between architectural ceramic and contemporary site-specific art.

1.4 Summary of aims and objectives

- To use the artist/researcher's practice as the basis of the investigation and principal mode of research into the application of ceramic in contemporary architecture.
- To situate the practice within the context of the historical and contemporary use of architectural ceramics.
- To examine the commissioning process from the artist's perspective through the participation in, and subsequent reflection on, commissions for site-specific ceramic artwork.
- To propose procedural guidelines, based the outcomes of the Case Studies, for other practitioners working in the field of site-specific ceramics.

1.5 Definitions of key terms

Throughout the text terms have been employed that are specific both to the field of architectural ceramics and to the context of the research project. Whilst specialist or technical terms appear in the glossary in appendix 1, other key terms and phrases have been identified which have a specific meaning within the context of this research. These are examined in the following section and form the frame of reference within which this study is based.

- **Practice-led**

The research is initiated in practice and carried out through practice. The study is centred on and driven by the researcher's art practice as the primary means of 'testing the hypothesis', and is itself evidence by which conclusions can be drawn by reflecting on this practice, comparative analysis and evaluation. The artwork also becomes an outcome of the research, exhibited in the public domain for peer and public review and criticism.

- **Reflection in/on practice**

This concept conceived by Schön (1991) describes the process by which a practitioner thinks and learns whilst involved in an activity (artwork); evaluating and reappraising it on completion in order to derive information which may inform future work. In the context of this research reflection on the practice has been the means of analysing the site-specific work (Case Studies): re-examining the process of design, collaboration, funding, etc. after the completion of the work. This introduced a degree of detachment or objectivity which may not have been possible during the actual carrying out of the commissioned artwork, and enabled comparisons to be made between the Case Studies.

- **Artist / researcher**

This term is used in preference to *the researcher* in the text where the objective third person is used and was felt be the most appropriate way to refer indirectly to the author of the research whilst emphasising that the study has been carried out first and foremost by a practising artist. In describing the nature of the researcher's practice, however, it was more appropriate to use the first person as this describes the personal vision and approach taken in the art practice , and therefore underlining the research.

- **Architectural ceramics**

For the purposes of this study, 'architectural ceramics' refers to details or features manufactured from ceramic which are subsequently installed into buildings; either integrated directly into the fabric of the building or installed after the building is completed and as such integrated in terms of design, composition and imagery. Historically this term This type of work does not necessarily have to be of an enormous scale, as frequently discrete details positioned strategically can enhance a building more successfully than larger items.

- **Public / private**

During the course of the research programme both 'public' and 'private' artwork has been produced. The ceramic features produced to commission as part of the case studies have been specifically designed for urban outdoor sites or public buildings and a collective audience, and is consequentially referred to as *public* work. This is as opposed to *private* artwork made in the relative privacy of the studio and intended for gallery exhibition or made in order to experiment with materials and processes.

- **Site-specific**

This term repeatedly appears when describing public art. It refers to any art work or feature (painting, sculpture, seating, fountains, etc.) which has been designed for, and installed in, a particular place or site. In “Art in Public” Irwin (1992) defines site specific:

“Here the sculpture is conceived with the site in mind; the site sets the parameters and is in part the reason for the sculpture. This process takes the initial step towards sculpture’s being integrated into its surroundings.”

This aspect of a piece of commissioned artwork is an important consideration in the design process: namely how the history or nature of the site can influence the development of imagery and structure, leading to a resulting piece which is fully appropriate to its surroundings. (This will be examined in detail in the case studies, and with other examples of architectural ceramics.) This term has been used in preference to Public Art when describing the nature of the researcher’s practice as the work, which although designed for specific buildings, were not in the strictest sense public places.

- **Percent for Art**

This term is defined in the report of an Arts Councils’ steering group (1990) promoting the implementation of this policy:

“Percent for Art: the method by which a proportion of the capital cost of buildings and environment schemes is set aside for commissions to artists and crafts people”

This is an important funding mechanism facilitating the inclusion of art into architecture and was a key area for examination in this research project

- **Architectural environments**

Within the context of this study, 'architectural environments' refers specifically to the type of site into which the commissioned work (case studies), made as part of this research project, have been placed. Such sites include urban environments, building schemes and housing developments, as opposed to making work to be sited in parks, or the landscape. The work has a direct relationship visually and physically with the surrounding architecture.

- **Ornament**

In relation to the work examined in the course of this research, ornament refers to a decorative or visual detail (in this research, made of ceramic), which adds to or enhances areas of buildings such as entrances, making them a focal point or feature in the overall visual effect of a building. *Integrated ornament* refers to ornamental details which have been built into the fabric of the building, or which have been designed and installed in a way which is in keeping with the building, rather than being obviously applied as an afterthought.

1.6 THE NATURE OF THE RESEARCHER'S ART PRACTICE

1.6.1 Introduction



A Grotesque detail

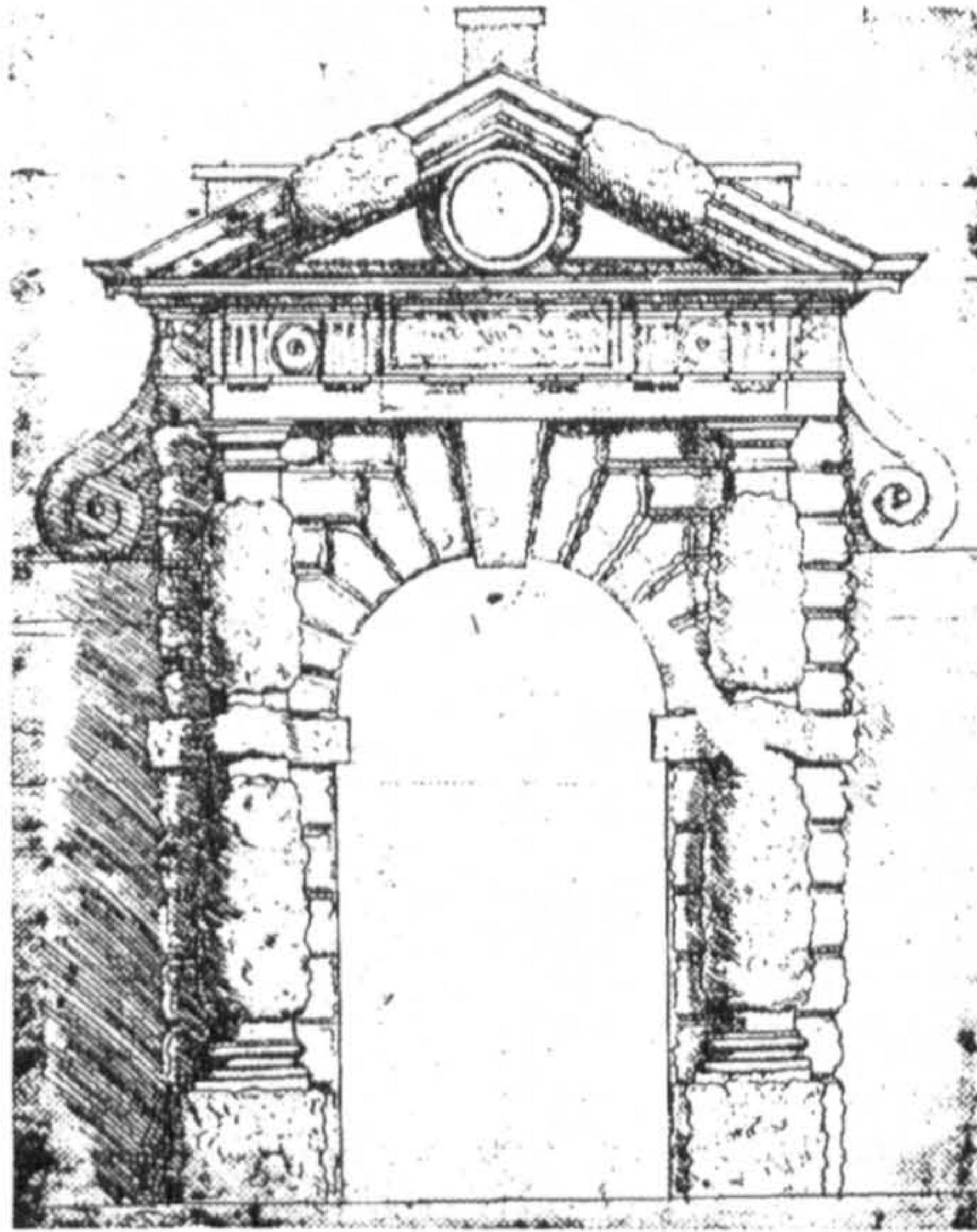
The aim of this section is to describe the artist/researcher's practice that underpins this research project, and to establish the characteristics of the art practice in terms of imagery, form and content, and the design and making processes used in both "public" and "private" work. This will show the perspective from which this project has been approached, leading to the choice of methodology, and will enable the art practice to be examined within the wider historical and contemporary context of architectural ceramics.

An analysis of the artist's own practice could be extremely subjective. This has therefore been approached by devising a series of hypothetical questions which might be put to another artist to establish the nature of their practice:

- Define your work / discipline - e.g. sculpture, ornament, design, architectural ceramics, etc.
- What are the sources and nature of the imagery used?
- How influential is the material on the nature of the artwork produced?
- Where is your practice located in relation to public art, site-specific art, community art and art for architecture?
- Who is the work made for? (public / private) How does this affect the design approach?

These have been used as guidelines in establishing key aspects of practice and to show its importance in relation to this research project.

1.6.2 Imagery



Inigo Jones

Oatlands Palace (1617)

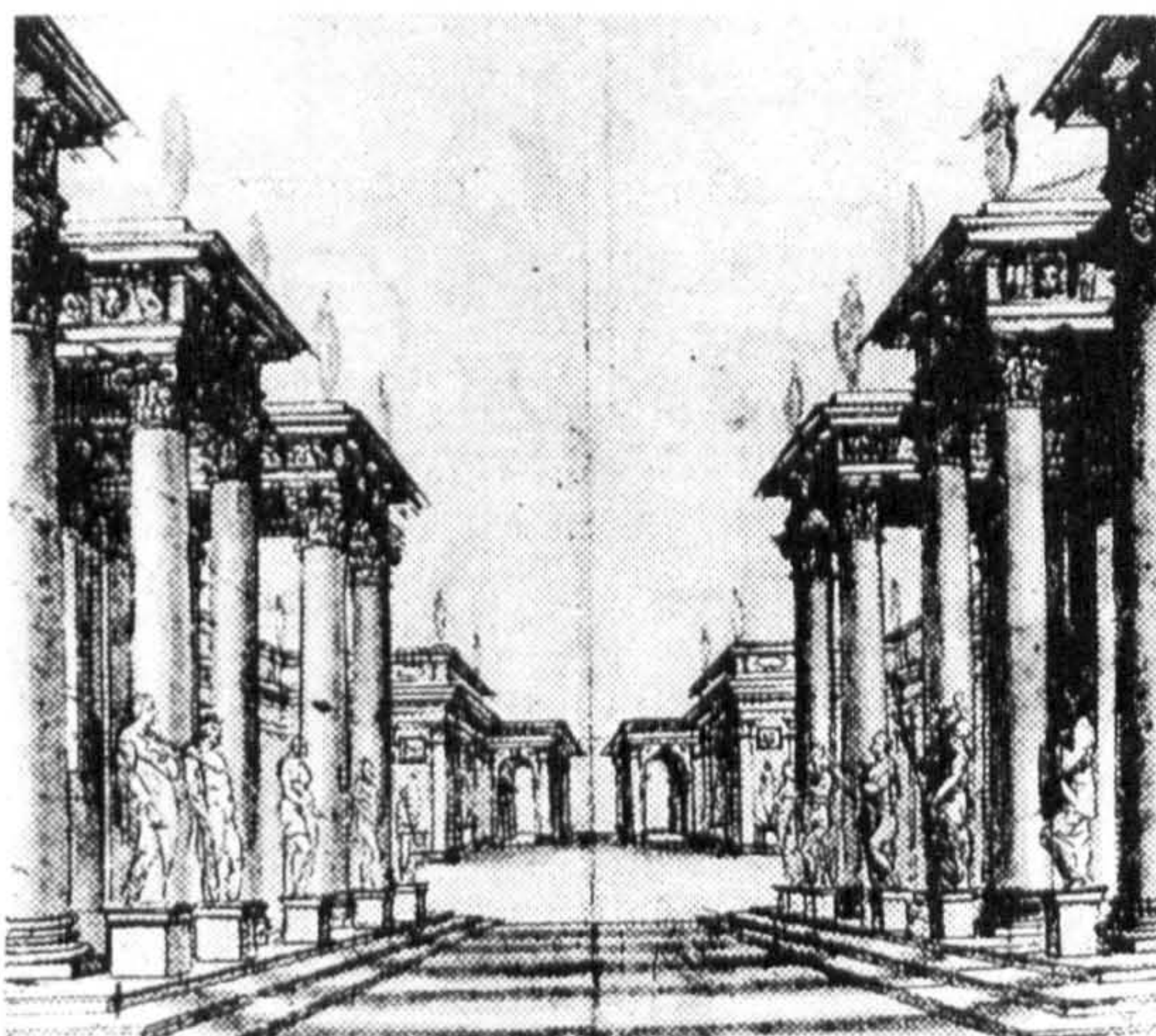
The most important source of imagery has been architecture and architectural ornament; particularly highly ornate historical buildings and bizarre buildings and structures, e.g. follies and grottoes, that appear to have no real purpose other than fantasy. I am also fascinated by formal garden design and stage sets which have a similar intention of fantasy, escapism and suspension of reality.

Formal garden design and the inclusion of water features and grottoes were at the height of popularity and design during the 16th century in Europe. This style evolved

from a revival of interest in Classical mythology and philosophy relating to the notion of order and chaos. These gardens became symbolic of man's control of Nature, and by virtue of this metaphor, symbolic of the landowner or monarch's status and influence over the realm. Formal garden design was taken to a peak in the 16th and 17th centuries with gardens such as those at Hampton Court and Versailles. The designs of 16th century architect and designer Inigo Jones combined theatre with garden design where, not only the formal gardens but the views beyond, became the backdrops for open air performances and

Inigo Jones

Scenery design for the masque Albion's

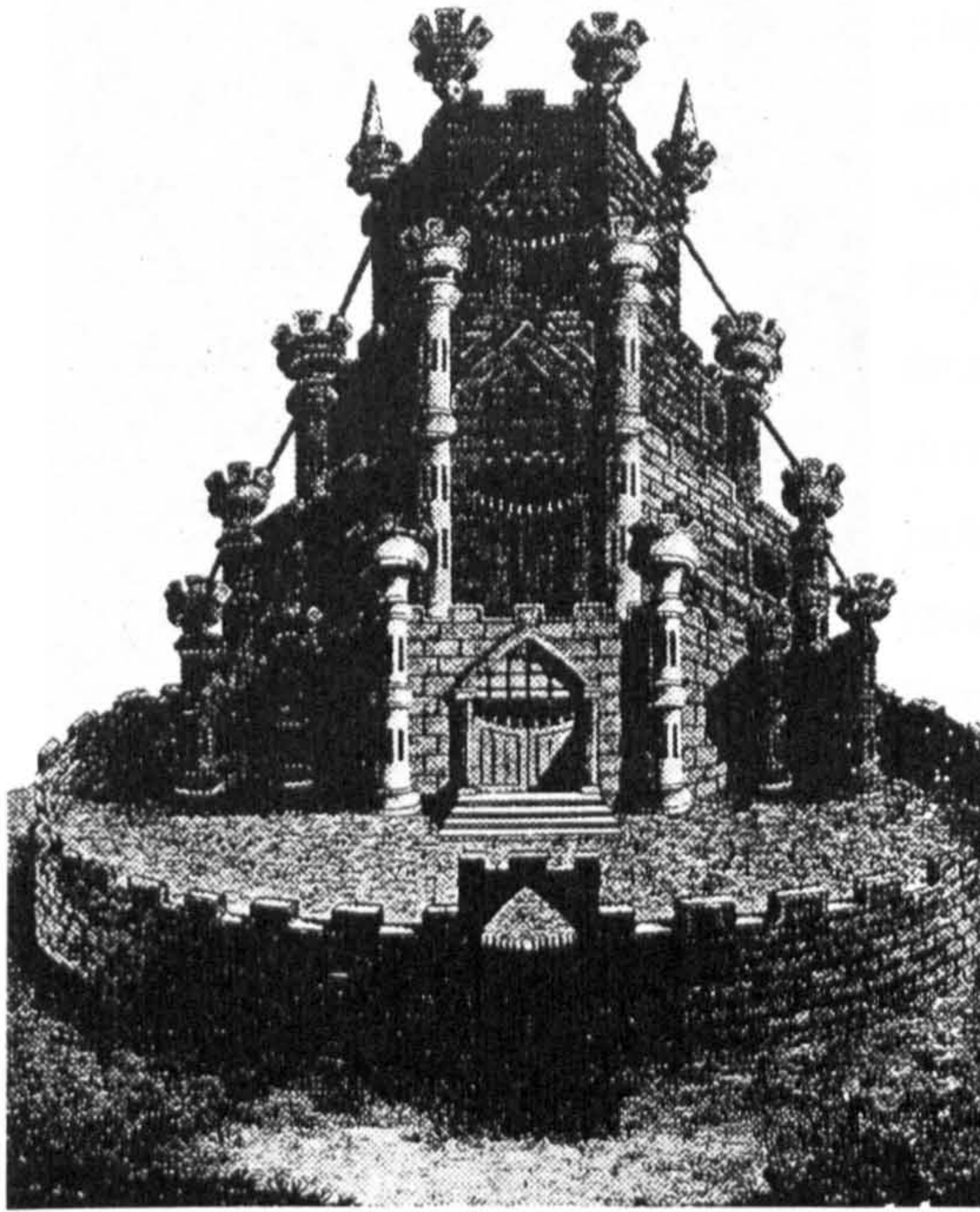


Triumph

the re-enactment of Classical tales in the 'Royal Masques'. These designers were considered important members of the court, however, most are unknown, having designed fantastic features and garden schemes for wealthy landowners wanting to leave their mark. (This was similarly the case with many of the designers and makers of ornamental detail for buildings.)



Doorway. Carved and glazed brick (Wheeler, 1994)



*"Old Sarum" shown as a
Gothic folly Engraving
(1798)*

The design of fantastic and ornamental buildings and structures has continued into the 20th century where their creators have often been labelled eccentrics. Some of these builders have been trained artists or architects such as Gaudi, but others such as Ferdinand "facteur" Cheval were not formally trained and spent 33 years building a monument to himself from pebbles. Contemporary art practice using installation could be seen in part as a continuation this tradition: creating a controllable environment in order to express a

concept, or by creating artwork in and involving the landscape.

As well as having a general interest in architecture, it was the creation of places, and the way that ornamental details and features can introduce a distinct character or mood to a building, that first led me to be interested in site-specific art. To date the majority of my work draws from ornamental details on historical buildings, many of which are only visible by looking up above modern shop facades, and doorways. These features are unnoticed by most people passing by, but often give a clue to the previous use of a building, its "personality" and that of the architect, craftsmen or owners.

Doorways and arches have been a re-occurring form in my work in the last few years; they provide a strong form and structure forming a base for elaborate ornamentation. Historically doorways and entrances were a key site for ornament in architecture, being welcoming or forbidding and as a means of signifying the status of the building's owner to those wishing to enter. There is much symbolic meaning associated with doorways; as a link between places, inside and out, different



*Detail of capital, Fawcett
St. Sunderland*

physical, mental and spiritual states; and as such appear as a re-occurring theme in religion, literature, film and mythology. Physically doorways are two dimensional facades which, when open, become three dimensional by virtue of their potential to be passed through into another place. The creation of the illusion of a third dimension through the use of two dimensional surfaces or the lighting of low relief (as used traditionally in stage sets) I find similarly interesting. Whilst notionally I am attracted to form, surface and the three dimensional

qualities of sculpture, along with the potential of handling clay in this way, the majority of my work is basically flat and viewed from the front. Through the use of low and high relief, texture and colour it is possible to create an impression of three dimensions or form on a facade. In this respect, colour has been important in developing surface and to create a mood in the piece, although more recently I have relied more on the use of shadow in monochrome relief to create the illusion of depth and variety of surface.

*Detail of ornamental
pillar, Gray St.
Newcastle*



For a long time I have been interested in ornament and images that appear to be light and humorous but may contain more sinister undertones. In terms of architectural ornament, this is attributable to quality of light: features that might appear to be very light and airy in a sunny southern European climate can seem grotesque, as if emerging from or enveloping brickwork and stone facades, in darker northern climates. This duality is a feature of many aspects of Northern European Renaissance art and architecture,



Wall Fountain (1991) Brick and lustre glaze

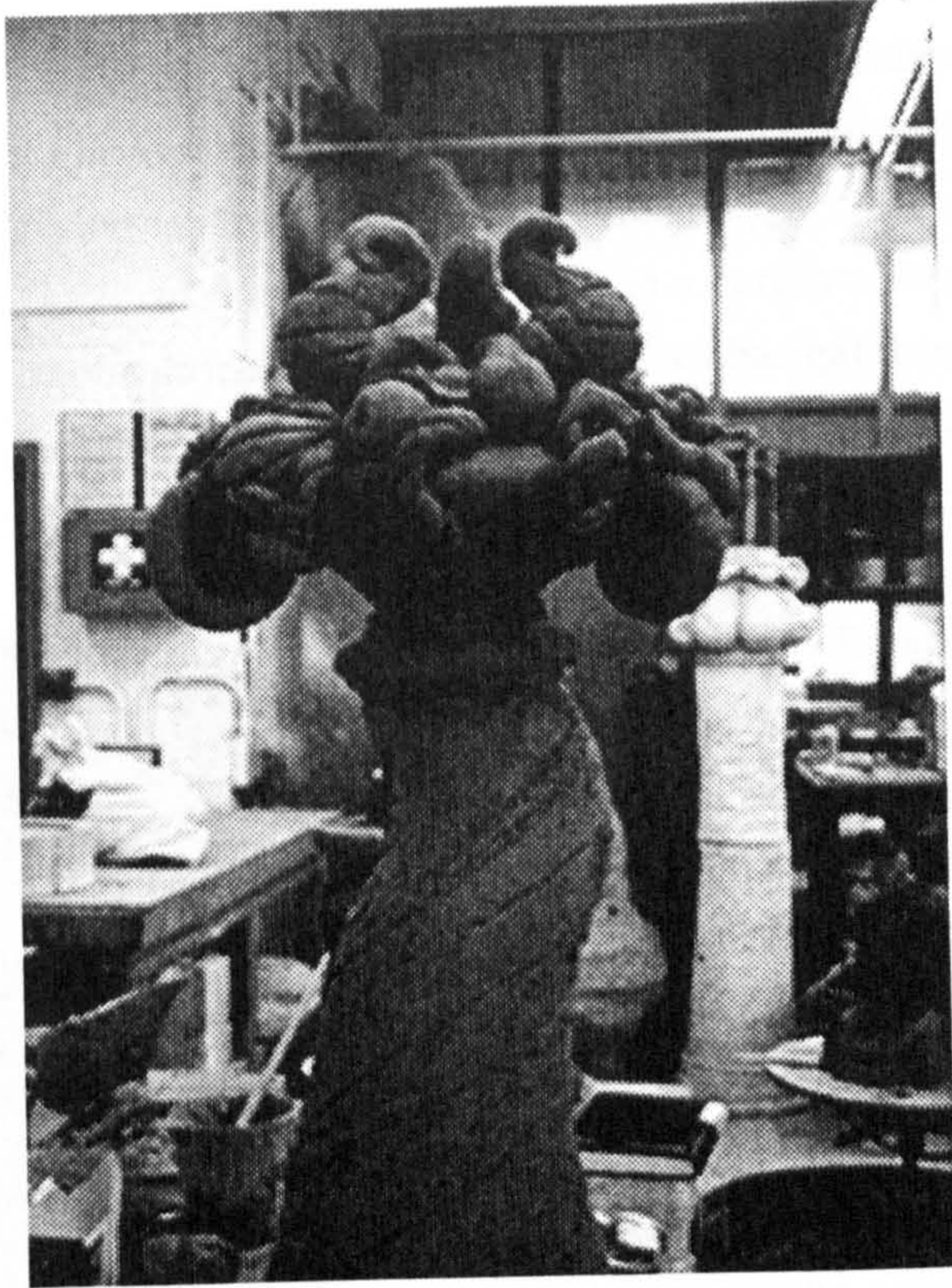
illustrated in drawings and engravings of artists such as Diäterlin, Dürer, Breugal and Bosch, which combine the grotesque with a bacchanalian humour. Contemporary illustration by artists such as Maurice Sendak, Arthur Rackham, Mervyn Peake similarly draw upon these characteristics in creating imaginary places and characters.

*Doorway pediment,
hand built stoneware
(Wheeler, 1994)*

*Witherwack Nursery,
Sunderland*



My work has developed from small freestanding objects based from architectural forms and the quirky characteristics of finials and other details to highly ornamental wall fountains and cornucopian garden ornament to carved brick reliefs for architecture. There has been a natural progression in my practice, from initially using historic architectural ornament as the primary source of imagery in small scale 'objects', to making site-specific ornament for new buildings. The same basic themes have run through my work: highly elaborate ornamental forms containing humorous and grotesque elements and references to architectural/historical styles. This eclectic choice and collation of sources of imagery could be said to be a typically post-modern approach to design which was similarly said to typify the approach by designers at the end of the 19th century (Barnard, 1973).



**Two forms
constructed from
coiling
(Wheeler, 1991-92)*

One of the criticisms levelled at post modernist ornament is that it appropriates imagery from a variety of historical sources, giving no consideration to its meaning and suitable application. The term eclectic is often used in a derisive way, with the implication that the artist/designer has gathered images and designed in a haphazard way with no serious intention or consideration. I have found it an important part of my design process to collect imagery from many sources and although



*Detail of brick carving
(Wheeler, 1992)*

these may have initially appeared diverse, there are connections, a 'thread' running through, which forms the personal characteristics in a continuing practice. I see no problem in making references to the historical application of ornament to architecture, as this forms a 'framework' from which to evolve new images, with meaning derived by virtue of the work being site-specific. The involvement in 'real' site-specific projects necessitates an awareness of the formal aspects of the use of ornament in architecture and the need for a strong underlying form to 'carry' the ornament successfully.

1.6.3 Clay as the chosen medium for my practice.

Clay has been the principal material used in carrying out work for public commissions and in my practice generally. Although the specialist knowledge of one material might appear to be limiting and leads to the automatic consideration of solutions in terms of ceramic it is only restrictive in terms of the limit of knowledge or the desire to experiment. I have found clay to be immensely versatile in its application to design problems and commission briefs, and continue to be excited by the challenge of producing very large-scale work for architecture using clay.

*"Heavens above"
Hand built ceramic
arch way.
Witherwack Nursery,
Sunderland
(Wheeler, 1994)*



Whilst the material has certainly had an influence on the nature of forms (fluid, organic, voluptuous) very often the use of clay has been the most appropriate medium to realise ideas and imagery. The attractive qualities of clay lie in its ability to be transformed from mud into something that has the potential to be highly functional, decorative and virtually permanent , whilst it can also be one of the most frustrating materials to work with. It almost has to be persuaded to be manipulated into forms and it is only through experience that the maker learns how damp or dry it needs to be or how large a structure can be made before it collapses ('Reflection in action'; Schön, 1991). In many ways it is the challenge of working in such an awkward and yet adaptable material that is so appealing.

One of the oldest ways of building clay forms and vessels is coiling . Although associated with 'traditional' pots this is easily adapted and has proved particularly appropriate for shapes such as columns where the form can be built up in layers. This method is immensely satisfying in its immediacy, involving the use of no equipment, and also in that it is such an ancient process, involving a hands on rhythmic, almost meditative activity, rolling the coils and building up structures which almost seem to grow in an organic way. For practical reasons

and metaphorical associations, it seemed the most appropriate method to use for Case Study 1 where the theme of the commission was the tree of life.

Sculpting or modelling in clay generally involves a building up of form ('positive') and in this respect carving brick could be seen as the opposite activity ('negative'), involving the taking away of material to reveal the form or image. Building forms using coils or slabs of clay involves a great deal of direct contact with the material and carving initially seemed a very different activity. With experience, however, it emerged that the best way to carve was to feel the forms as they develop; using eye, hand and imagination to develop the relief, as if 'releasing' it from the clay blocks. In the finish it turned out to be just as hands on an activity as building with wet clay.

1.6.4 Defining the practice

For practitioners working with ceramic, defining the practice in terms of whether it is art or craft, functional or nonfunctional has been a point of debate ever since William State-Murray started making forms in clay in the 1920s and 30s calling them works of art rather than pots (Clark, 1995; Henderson, 1994; Dormer, 1991). This legacy has been passed on shaping current ceramic studio practice and teaching. Johnson (1995) defines craft as:

“...practices which involve the investigation of materials and processes; display a wide range of responses to materials; have an impulse towards innovation; are aware of tradition; are concerned with the times we live in.”

It is interesting that this could be as equally applied to sculptural practice involving materials as to the applied arts.

Ceramics has been caught up in an “Arts versus Crafts” debate during the past ten years due in part to the very nature of the material and practice which can encompass so many different

ideas, qualities and functions. Fuller (1990) in his essay "The Proper Work of the Potter" argues that ceramicists should give up trying to adopt the language of sculpture and return to their 'functional craft pottery' roots. Others such as Greenhalgh (1989) argue that ceramic has its own particular identity and to try and create barriers between the various areas within the visual arts and to confine ceramic within a craft tradition is not relevant today. Instead ceramicists need to readdress their position in relation to historical links with architecture, industry, the decorative and fine arts within the context of contemporary society.

Artwork that is described as decorative or ornamental is often considered less important than Fine Art as it does not necessarily convey any meaning or concept (Holder, 1987). Johnson (1995) observes that there is not enough distinction between amateur and professional craft practice and, more often than not, craft practice is associated with the amateur. In fact, decoration has an important role, particularly in architecture, as a means of introducing humanism, humour, colour and symbolism into what might otherwise be very formal or sterile environments. Larson (1993) and Miles (1995) both discuss the importance of considering the quality and enhancement of lives through the introduction of art/ornament in architecture and the need to 'reclaim decoration' as valid in contemporary contexts.

Whether the artwork produced is art or craft has not been an issue in this research project, it has been more important to see it in relation to a historical art practice from which to learn and develop. The legacy, and philosophy underpinning a particular specialism, (ceramics, sculpture etc.), is integral to education or training as well as particular skills or materials. The educational background largely dictates differences in the art practice so that, although I feel little affiliation to pottery (in the traditional

sense of production of limited or large editions), my educational grounding has been in studio ceramics/craft practice as opposed to the philosophies, ideas and history underpinning fine art sculpture.

Although it is now seen as a branch of contemporary studio ceramic practice, (King, 1990) architectural ceramics comes from the tradition of a specialised branch of ceramics where the work, however sculptural or ornamental, has a function- that of being designed for incorporation in architecture (see Section 2). The material's inherent qualities have been exploited in its use as lightweight, weather and fireproof cladding, in imitation of stone or to introduce colour and detail into the fabric of buildings (Stratton, 1993). This field has traditionally depended upon the patronage of the architectural profession, its changing fashions, and the preferences of the building owners.

The area in which I have most interest is that of art in architecture and it is here that I feel that my practice lies most comfortably. I am interested in continuing and being influenced by the long history of architectural ceramics by designing and making ornamental details for new buildings. Involvement in architectural ceramics has in many ways removed the problem of categorising my work as its role is already basically defined. The artwork, however decorative, still has a function: that of introducing visual focus, colour, symbolism and sense of proportion to architecture. This, rather than being constraining, gives greater freedom to explore imagery and form on an architectural scale and for a specific site.

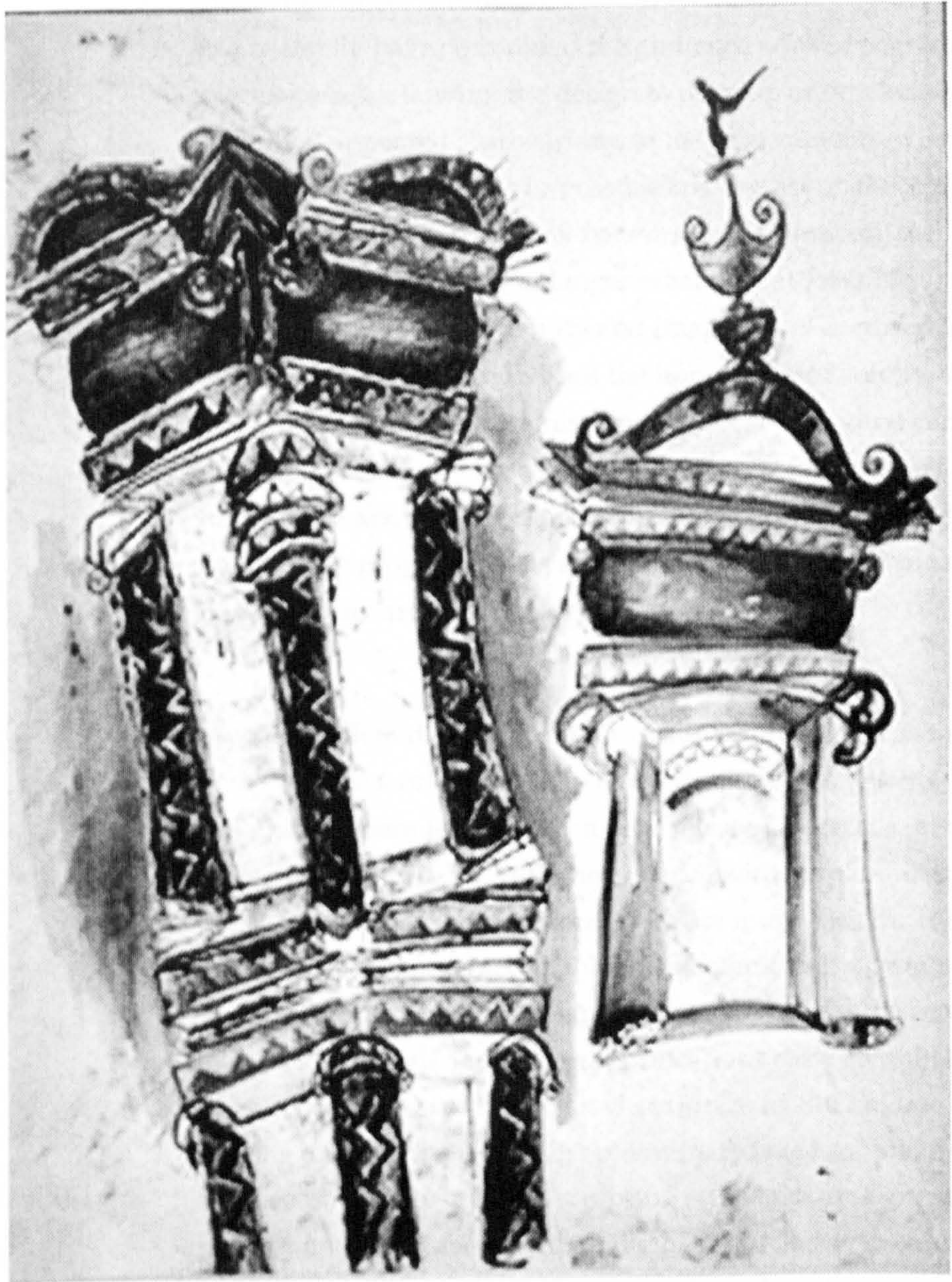
1.6.4 My art practice in relation to Public, Site-specific and Community art, for architecture.

Initially there would seem to be little difference between these terms but (as discussed in section 2.2) there are different approaches, agendas and concerns involved in each. By its nature, the commissioned artwork produced during the course of the research programme was site-specific, in that it was designed for particular real locations with the imagery generated as a response to the site. It might not be considered, however, to be Public Art: whilst public art is site-specific, art is not necessarily public.

Although the work was designed for and located in what could be called public places (medical centre, housing schemes, university) they are not strictly speaking, accessible to the public (unlike public parks, or city centre squares) and so the work is not seen by passers-by, but by people who have to live and work with it. The work was not produced as a result of consultation with the users of the buildings but rather through the negotiation of an artist's brief with clients, the owners of the building, commissioning artwork on behalf of the users or residents. (this will be discussed in greater detail in Section 5). The aspect of working in collaboration, producing a piece of work designed to be permanently sited in a public place introduced a different dimension to my practice - having to consider the opinions of other people as part of the design process, whilst retaining the character and integrity of the artist's practice.

1.6.6 Public / private: the design approach and audience

The question of whether the approach to design and making changes according to the audience; gallery or public is an important one in understanding the design process. The most obvious difference immediately encountered when approaching



Drawing- Architectural details (Wheeler, 1990)

commissioned work was that the wishes of another party, the client, had to be considered. Prior to the research project I would not normally have considered the audience when designing a piece of work, allowing the design to develop or be discarded. Initially it appeared that working to the requirements of a client or architects plans places impossible constraints on the artist's freedom and the character of the work, compromising the designs. This is certainly a danger where the artist is not confident of their own identity and imagery and occurred in the earlier projects. This underlines the importance of continuing to make work alongside commissioned work so that ideas can be developed freely and then used as source and reference material for public work. This work has continued naturally throughout the research project and has served to reinforce my personal interests and "artistic language".

My approach to design for public commission is not dissimilar to the private work, other than in the design stage. When designing a piece for exhibition or as a test of materials or form, I usually work directly with the material without planning on paper first, other than occasionally a very rough sketch. This method would not be acceptable when submitting a proposal for a public sculpture, with requirements for the design process to be made explicit and design specifications to be submitted and a visualisation of the finished sculpture in situ before starting to make the work. The preliminary stages of planning and negotiation for a public sculpture often take up a greater proportion of the timescale than the making. This is in contrast to work which is not made to commission where the reverse is more likely, the artist making work as a direct, instinctive response to the materials.

It is virtually impossible to describe in a proposal the intuitive mark making or handling of clay during the making process to somebody who has no experience of working with the material or even of interpreting rough sketches. The closest the artist can get is to explain the construction and installation of the piece, show samples and hope that the client will have confidence in the artist's ability to produce the work. Part of a successful collaboration is for everyone concerned to know what is going on which involves close communication. It is necessary therefore, for an artist to be able to communicate ideas and proposals for an artwork in a way that can be clearly understood by client, architect, planners, engineers and builders. This necessitates the artist to adopt the language of architects and planners, rather than expecting others to understand sketches, and to be able to present plans, elevations, scale drawings, design specifications as well as being able to submit a written proposal and reports.

The commissioning of artwork is unusual in that it allows the client, usually untrained in art, to have a say in the imagery and design of a sculpture, whereas they would not expect to contribute to decision making on drainage, roofing or any other aspect of the building, leaving it instead to professionals. It is perhaps the aspect of ownership and aesthetic that makes this different and makes it all the more important that the artist has a clear idea of his/ her imagery in order to maintain integrity in the work. This re-emphasises the importance of continuing to produce artwork for experiment and exhibition along side commissioned work. There is a danger that the work will become stale if an artist goes from one commissioned work to the next without making the opportunity to explore new approaches to working with materials and imagery. It is easy for an artist who is not sure of the strength of their own imagery to be persuaded to make changes to designs which might end up resulting in compromise.

1.6.7 Summary

- The main source of imagery is fantasy and escapism with forms drawn from historical buildings and architectural details.
- The work is generally highly ornamental and designed for inclusion into buildings and gardens.
- Clay and brick are the predominant media using a variety of making methods; hand built and mould made.
- The work is seen as following a tradition of architectural art rather than of functional pottery or fine art sculpture.
- The work is site-specific but not necessarily public art.
- The relationship between public and private work is an important one with one feeding the other, enabling personal imagery to develop and quality and integrity to be maintained.



Detail, Carved brick panel

(Wheeler, 1994)

SECTION TWO- THE CONTEXTUAL REVIEW

2.1 INTRODUCTION

2.1.1 The relationship of practice to research

This section reviews historical and contemporary publications in order to establish the context within which the artist/ researcher's practice and this research project is situated, and to identify areas within the field of architectural/site specific ceramics where there has been little in-depth study to date. The term *contextual review* has been used in preference to *literature review* as, although the majority of the material is published texts, some information has been gathered from attending conferences and seminars, particularly those on the current state of Site-Specific Art where, in addition to published papers, points are raised in discussions which may never be formally 'published' but are still useful in reinforcing a contemporary context.

Much of the material reviewed in relation to architectural ceramics was historically based. This was valuable in enabling contemporary practice to be seen as part of a broader context and tradition. An awareness of successful projects and pitfalls encountered in the past informs and strengthens the contemporary practitioners' knowledge and approach. The case for having art in architecture is similarly reinforced by an awareness of how it has been incorporated in buildings in the past and how it may be applied appropriately in contemporary built environments.

Throughout the design and making of work for the Case Studies (Section 3) it was necessary to refer to both visual and written material for technical information and creative stimulus, and, in order to clarify the role of artist working alongside other professionals in a contemporary public and architectural environment, to examine how other artists have worked in similar circumstances. This not only helped to reinforce the

artist/researcher's practice and prevented it from becoming an isolated activity, rather than one which can be seen to be part of a wider context and tradition.

2.1.2 Overview of the layout of the contextual review

There is a wealth of available material relating to the application of ceramics within architecture, much of which was unsuitable for a variety of reasons: being either too historically based or too purely technical. Although it was necessary to be aware of the different types of material relating to the technical and historical aspects of the subject, involvement in these areas in depth would have diverted the research programme beyond the specialism of the researcher. One of the most useful outcomes of initially conducting a general search, therefore, was to establish, at an early stage, the areas of research that were not directly relevant or applicable to this project (e.g. specialised information on ceramic technology and material centring on the conservation and restoration of ceramic tiles).

The contextual review section has been divided into four areas that relate to main themes of the subject area and represent related topics encountered during the course of making the sited work for the case studies:

- Architectural ceramics
- Materials, methods and the maker
- Site-specific and public art
- Funding / patronage, collaboration

This illustrates the fields within the research topic and the main areas of emphasis with the headings used to identify and position key texts within the framework of the contextual review. Broadly speaking, the contextual review can be divided into two major fields of study: architectural ceramics and site specific art (*What and Why?*). These can then be linked by minor fields which consider the means and mechanisms by which these may be achieved (*how?*).. In theory, any one of these fields could be developed into a separate research topic in its own

right, therefore they have necessarily been examined with relation to the artist/researcher's practice and the aims and objectives of the research. (Illustrated in Diagram 2.1)

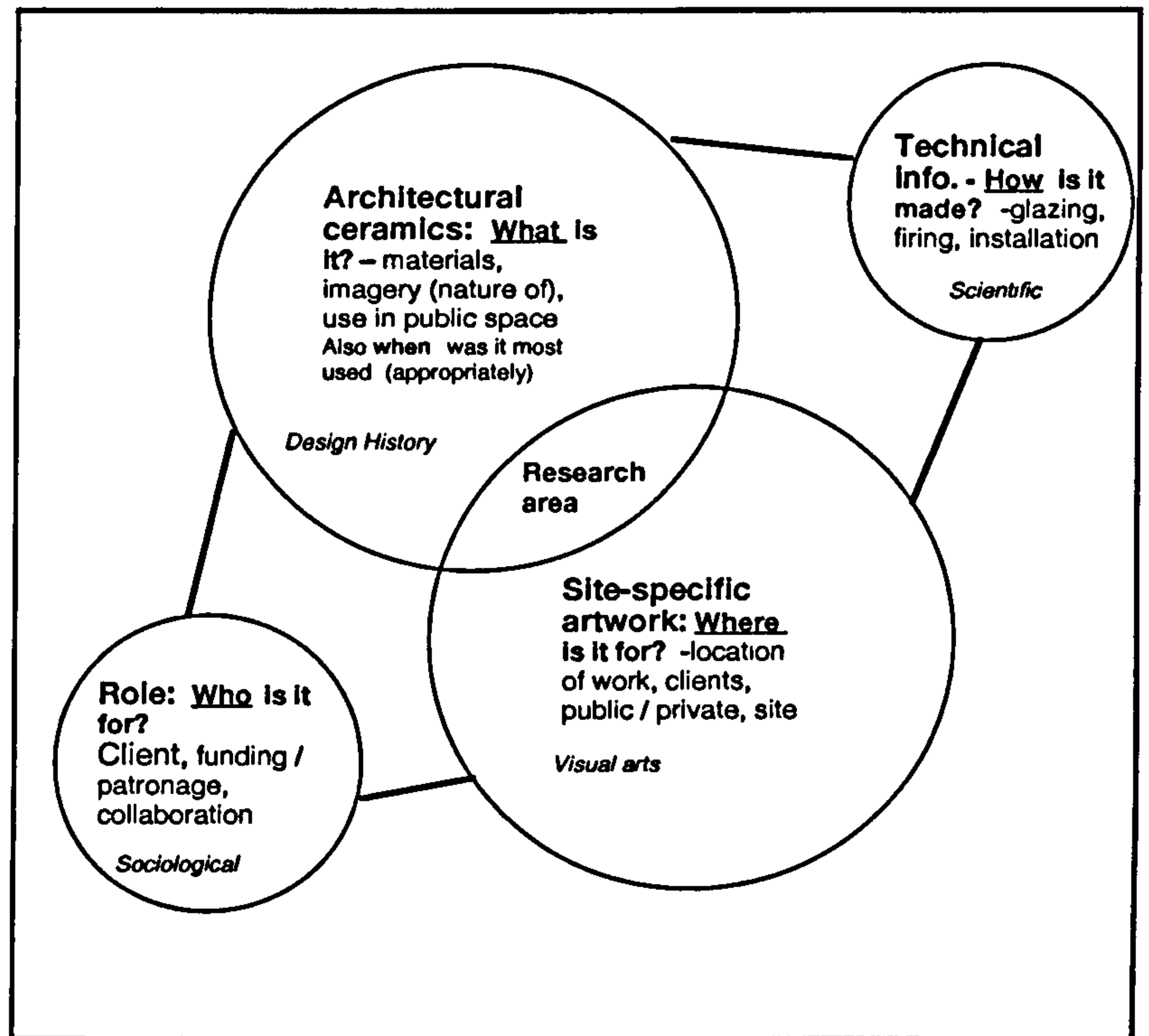
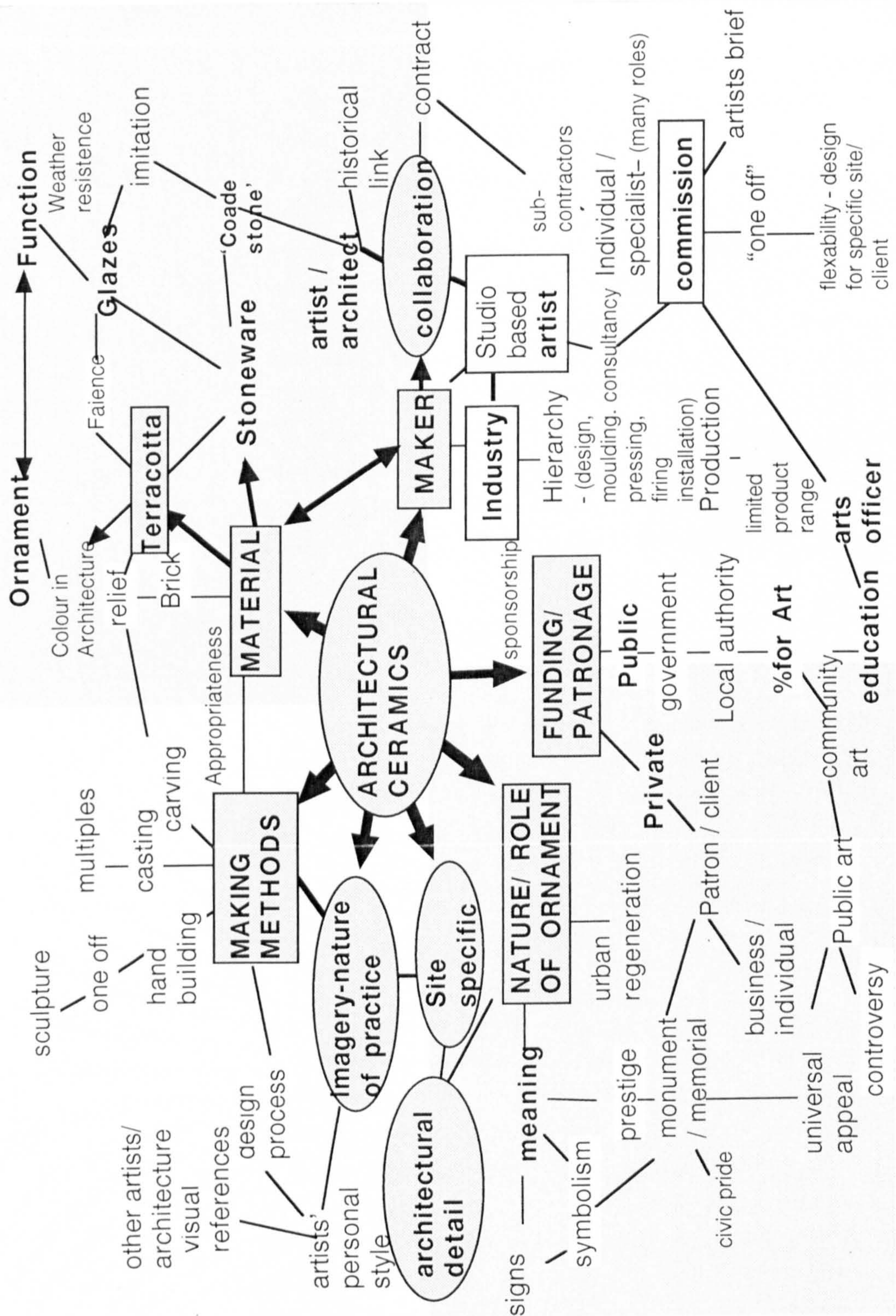


Diagram 2.1
Showing main
themes of the
contextual review

Many of the texts identified fell into several categories: it was necessary to establish a way in which to show how the subject areas overlapped and related within the context of the field of research. This was initially attempted using a 'mind map' (diagram 2.2) as a means to visually show the relationship between the various sections within the literature review.

With the artist/ researcher's practice and research project as the central 'hub', related topics form subsections growing outwards overlapping and interrelating throughout the project. Whilst showing the breadth of the research subject area, this method does not show any structure underpinning the contextual review.



Diag. 2.2 Mind map of the research area

Diagram 2.4 is a linear representation of the main structure of the contextual review. Four main sections are linked to key texts, being positioned closest to a section of the research area, and those positioned furthest away being the most general, having some relevance to all the sections. In reality, the subsections associated with the research project cannot be viewed in strict isolation with texts covering a number of relevant subject areas and similarly, the artist's practice cannot easily be broken down into individual areas of study as there are numerous inter-linking influences throughout the design process. (Zeisel, 1991) The purpose of such an overview, therefore, was to show the context in which an artist (within the field of architectural ceramics) might work, as well as to identify areas within this field of study which have not been extensively researched.

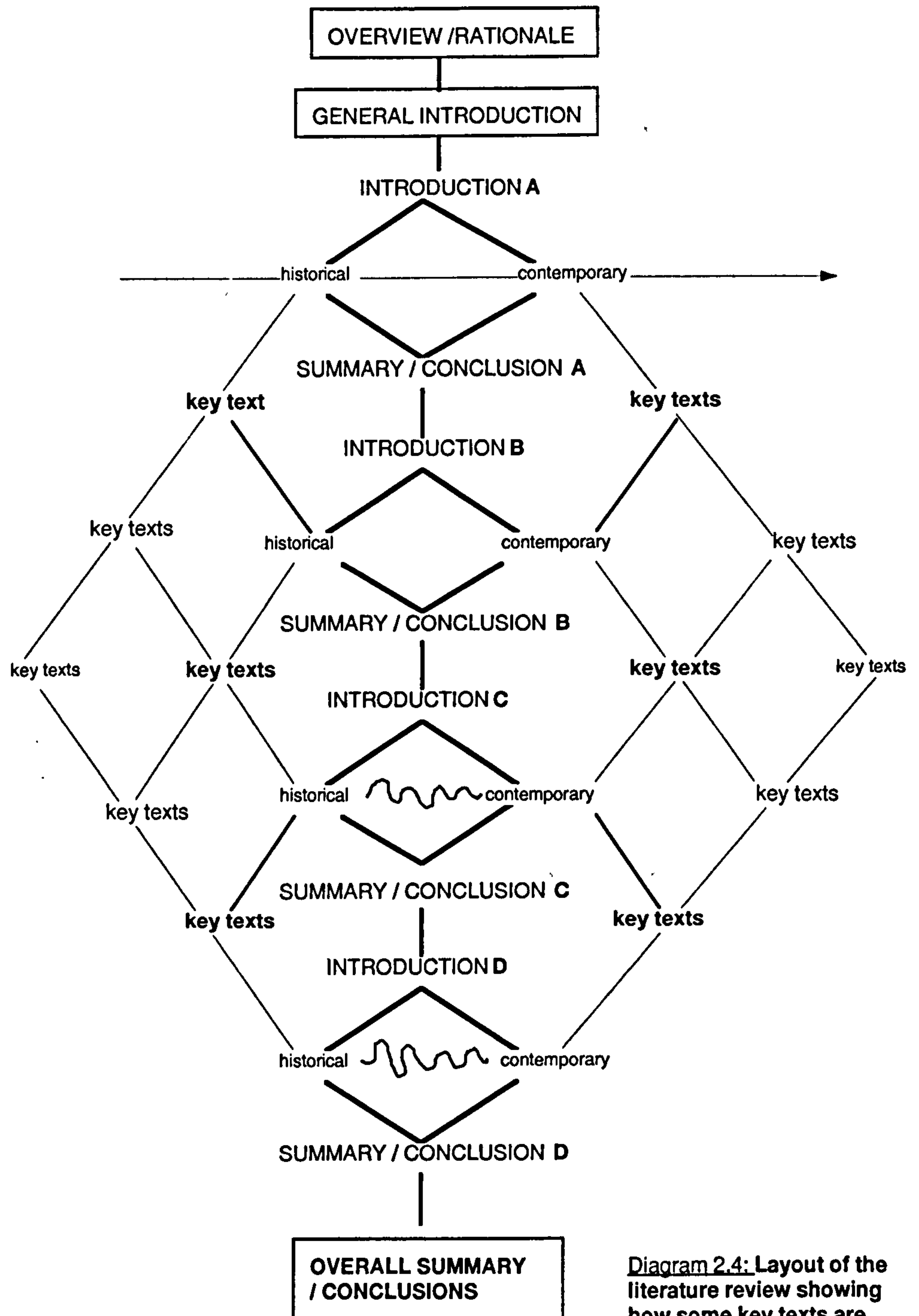
2.2 ARCHITECTURAL CERAMICS

2.2.1 Introduction

Architectural ceramics, although a specialised field within ceramics, covers a wide range of architectural features, both functional and ornamental, Hamilton (1978) defines it as:

“...those clay items which constitute part of a building or are of such a scale that they may be regarded as existing within an architectural environment and making a substantial contribution to it.”

The material reviewed in this section has necessarily been limited to texts that were of particular relevance to the researcher's art practice; that is, those relating to the role of ceramic as a medium for ornament and sculpture within architecture, rather than to its purely functional or technical role (chimneys, drain pipes, sanitary ware, tiles etc.). The majority of the examples of architectural ceramics incorporated in buildings described or illustrated in the text are terracotta, faience or brick, these being the preferred materials used in the Case Studies.



Using on-line literature searches and indexes, (both general, e.g. Art Index and the more specialised Ceramic Abstracts and TACS* Bibliography), information relating to the subject was found in a number of different areas: technical information, historical and current applications of the material, as well as information on specific artists, architects and their collaborations. The majority of the information was historical, from the late 19th century in journals such as "The Builder" (first published 1846) and more recently in specialist publications e.g. "Glazed Expressions", the journal of the Tiles and Architectural Ceramics Society. There was significantly less published material relating to the contemporary use of architectural ceramics .

Initially it was assumed that the most relevant texts for a ceramic practitioner would be technical manuals and text books about clay and glazes, installation, firing etc. For the purposes of this research however, it became more important and interesting to examine the broader context of architectural ceramics. Due to the scope of the subject, it has been necessary to limit the references to those predominantly from Britain and the USA. These have been the main source of information and visual stimulus in relation to architectural ceramics and site specific art throughout the research project. It should be acknowledged, however, that in European countries which have a history of using ceramic in architecture such as Spain, Portugal and Italy there is still widespread use of the material (particularly tiles) and some examples are illustrated in the text as they have been a source of imagery and creative stimulus. The Netherlands have made a particular point of exploring the use of ceramic for new buildings and sited sculpture in two major workshops, The European Ceramic Work Centre (EKWC) in Den Bosch and Ateliers 63 in Amsterdam. Similarly in Sweden, some of the most prestigious public artworks have been made by artists Ulla Viotti and Lilimor Pietersen from carved and moulded brick.

**PAGE
NUMBERING
AS ORIGINAL**

5000 BC	Mesopotamia	Sun-dried brick / adobe - mud & straw
2500-2000BC	Mesopotamia, Indus Valley	Earliest fired brick used in domestic architecture
2300BC	Mesopotamia	Steppedshrines-Ziggurat at Ur -sun-dried & fired brick
2000BC –	China	Use of fired brick in defence walls
1200BC –	Egypt	Use of polychrome inlaid tiles
604-562BC	Mesopotamia	Ishtar Gate built by Nebucadnezzar II. Modelled relief and glazed bricks
6thC BC	Etruscan empire	Decorative relief slabs, TC sculptures & sacophagii
4thC BC	Greece	TC. freizes& cornices for buildings
3rdC BC	China	TC. tomb figures. Great Wall
2ndC AD	Rome	Brick structures,-Pantheon , Baths of Hadrian
c500-565AD	Byzantium	Complex brick domes & vaults. -Hagia Sophia, Istambul (532-37 AD)
9th Century	Spain & France	Moorish invasion- spread of decorative techniques (<i>cuerda seca</i>) & brickwork.
	N. Europe	Remergence of brick- 'Romanesque' style
10th C	Middle / Near East	Rise of Islam- geometric tiles & patterns
11th-13th C (Middle ages)	N. Europe (esp. Germany)	Extensive use of decorative brickwork, relief tiles.
13th-14th C	Europe – Britain	Use of brick in Britain. Encaustic tiles
15th C	Europe (esp. Italy)	Increased use of moulded terracotta ornament, Majolica, Faience. (Della Robbia)
	Persia	Use of Lustre tiles and glazed brick
16th-17th C	'Low countries'	Elaborate use of terracotta -strapwork& scrollwork.
	England	Tudor Style-(Hampton Court) . London rebuilt in brick
18th C	Spain, Portugal, Holland England, Germany, America, Australia, India	Blue & white tile murals; <i>Delft, Azeulos, Majolica</i> Move to plainer brickwork-emphasis on entrances. Influence of European styles, adapted to climate
19th C	Britain	Mechanisation & improved kilns increase brick & tile production, Gothic revival- coloured brick &TC- TC used for lightweight, fireproof, decorative cladding for skyscrapers (Louis Sullivan)
	USA	
20th C	Britain & USA	'20s&'30s - extruded TC panels-Odeon cinemas Decline in use with Modernism.
Late 20th C		Reemergence of interest in durable,ornament

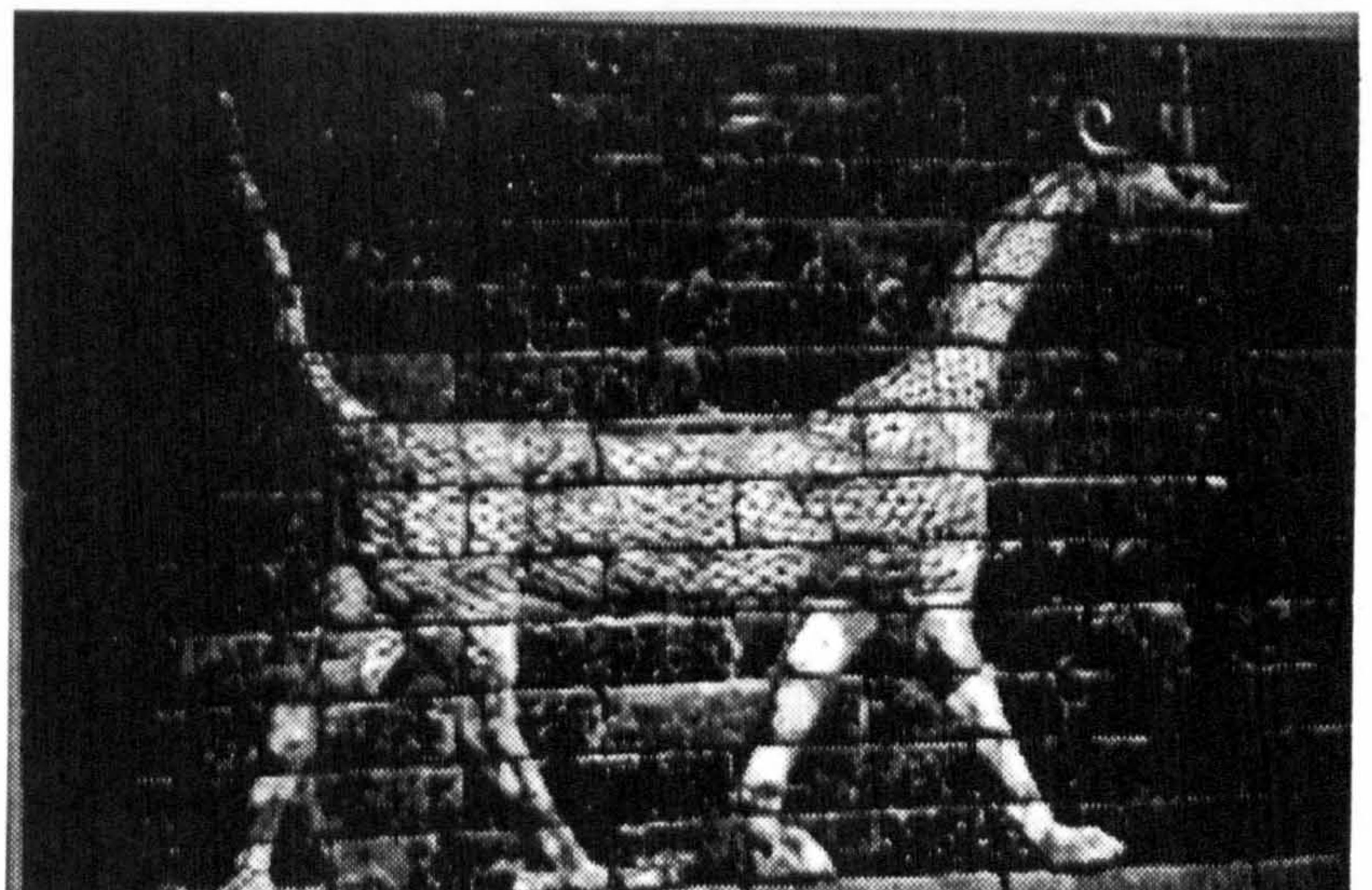
2.2.2 Overview of the historical use of architectural ceramics.

It would be impossible in this project to examine in detail the entire history of architectural ceramics, and so the review is centred on a period when ceramic was used extensively for architectural embellishment, to demonstrate both the versatility of the material and to place current practice within a historical context.

(The table opposite represents a very condensed chronological overview of the subject; it is not exhaustive, rather it shows these and other significant points in the development and use of ceramic in architecture, both as a building material and as medium for architectural embellishment.)

This research project is not intended to be a comprehensive historical survey of the history of ceramics as used in architecture, however it is useful to be aware of the extensive nature of the subject and to see current practice as part of an ongoing tradition. A wide range of published material exists on the subject with a number of authors giving a general historical overview of the history of the application of ceramic in architecture (Le Fevre, 1900; Davey, 1968; Hasluck, 1905). These texts not only show the breadth of the field and the length of tradition, but also emphasise the unique qualities of the material as one that is both functional and decorative.

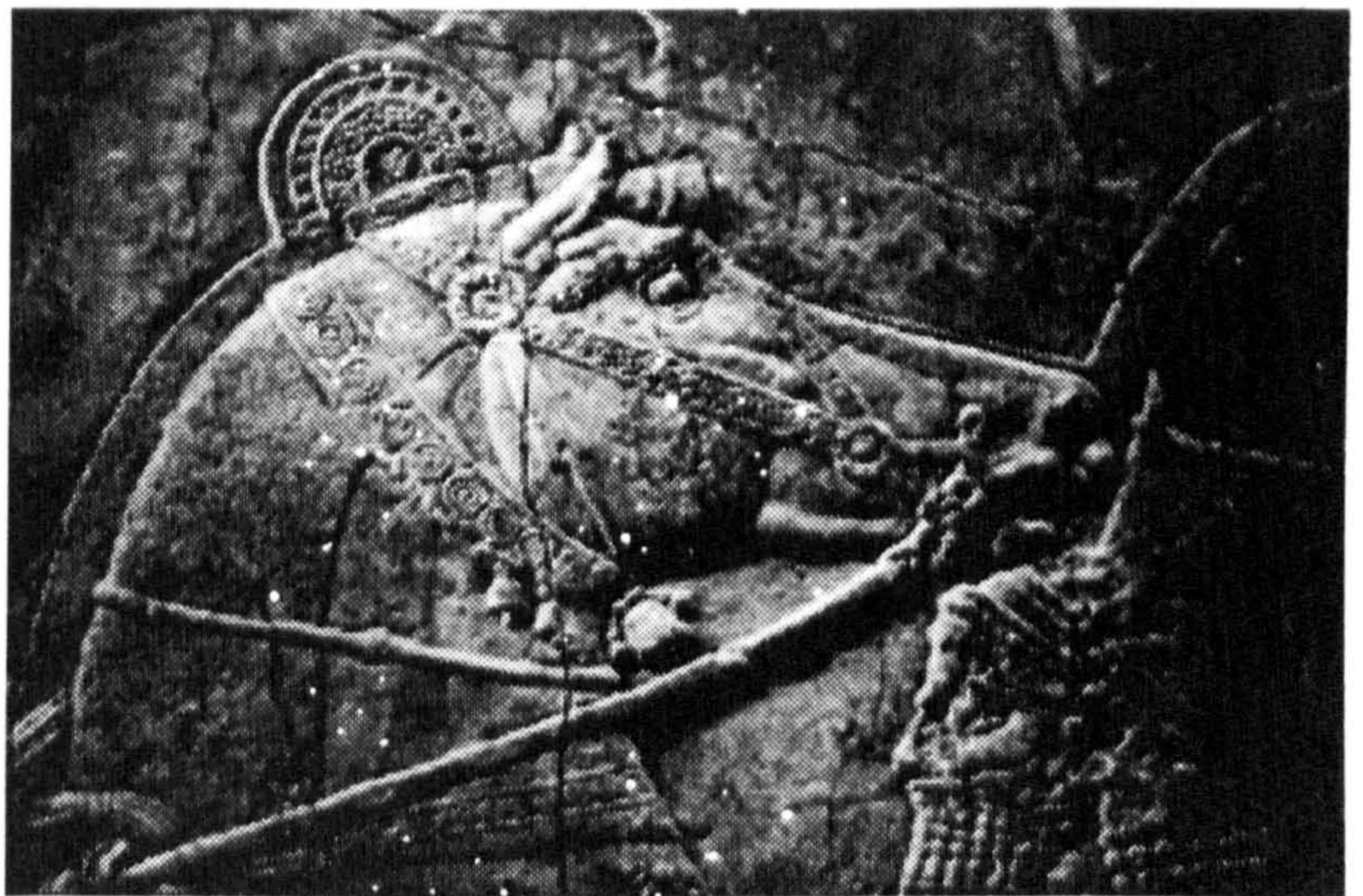
**Part of the Ishtar Gate
(604-562 BC): Carved
and glazed brick.*



In his introduction to "Terracotta Work", Hasluck (1905) states:

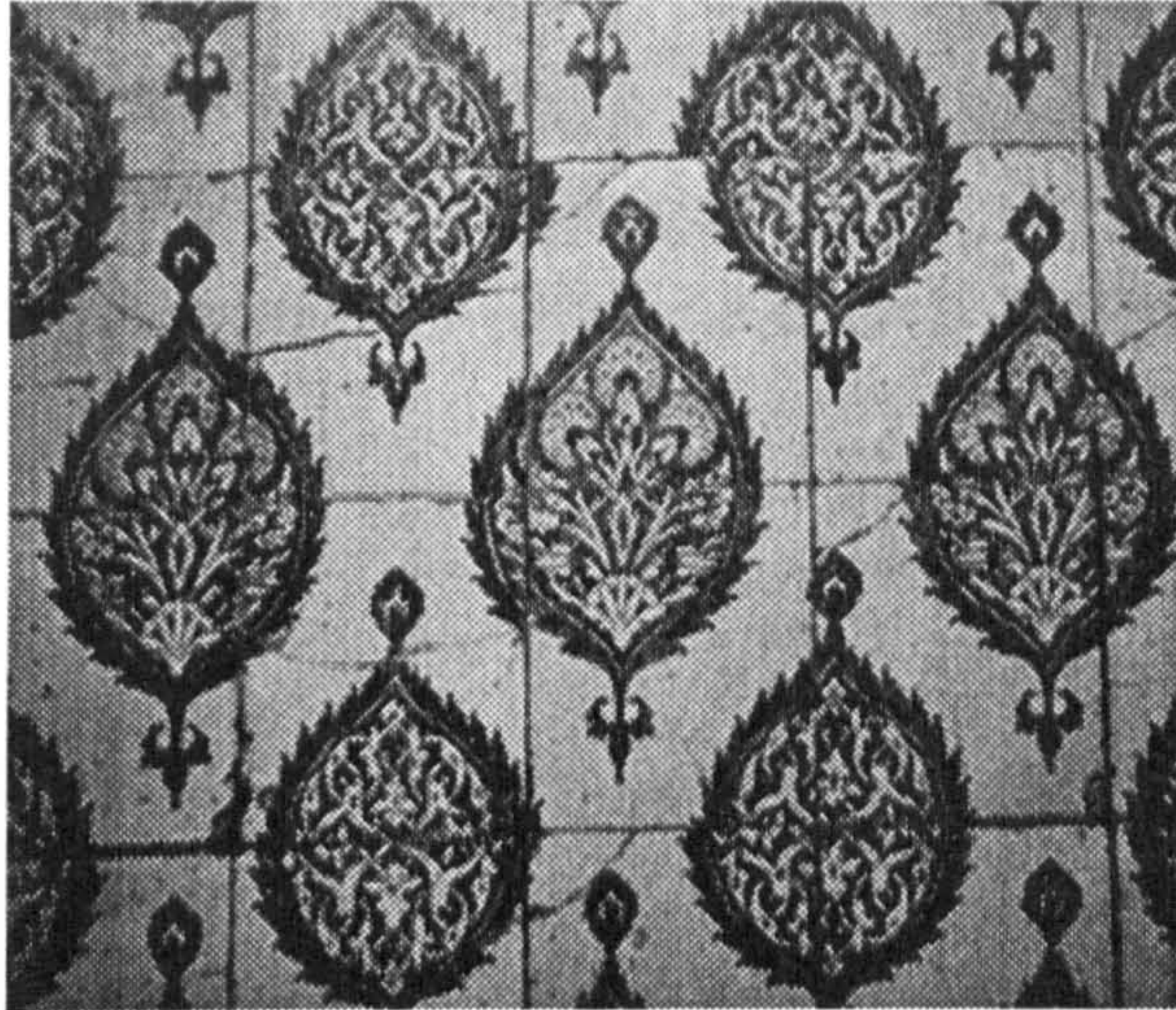
"Archaeologists are not agreed as to whether the art of working terracotta preceded sculpture in stone, but evidence of its antiquity is afforded by the numerous cornices, friezes, and bas-reliefs found in the ruins of very ancient buildings."

The earliest recorded use of clay as a building material in the form of sun-dried bricks dates from around 5000 BC in Mesopotamia, where clay from the Indus valley was particularly abundant. It was also in Mesopotamia where the first burnt (fired) brick dating from around 2300BC was found, used mainly in stepped temples (Ziggurats) at Ur, and where approximately a thousand years later fired clay was first used for architectural ornament (Davey, 1968; Plumridge & Meulenkamp, 1993).



Assyrian ceramic relief

By the sixth century BC fired clay and brick was used extensively throughout the ancient world with the most outstanding example of architectural art being the Ishtar Gate (604-562BC), built by Nebuchadnezzar II using carved, modelled and glazed bricks. Other notable achievements from before the first century AD were the terracotta reliefs of the Etruscans and the Greeks used to embellish their temples, and the Chinese terracotta tomb figures and soldiers.

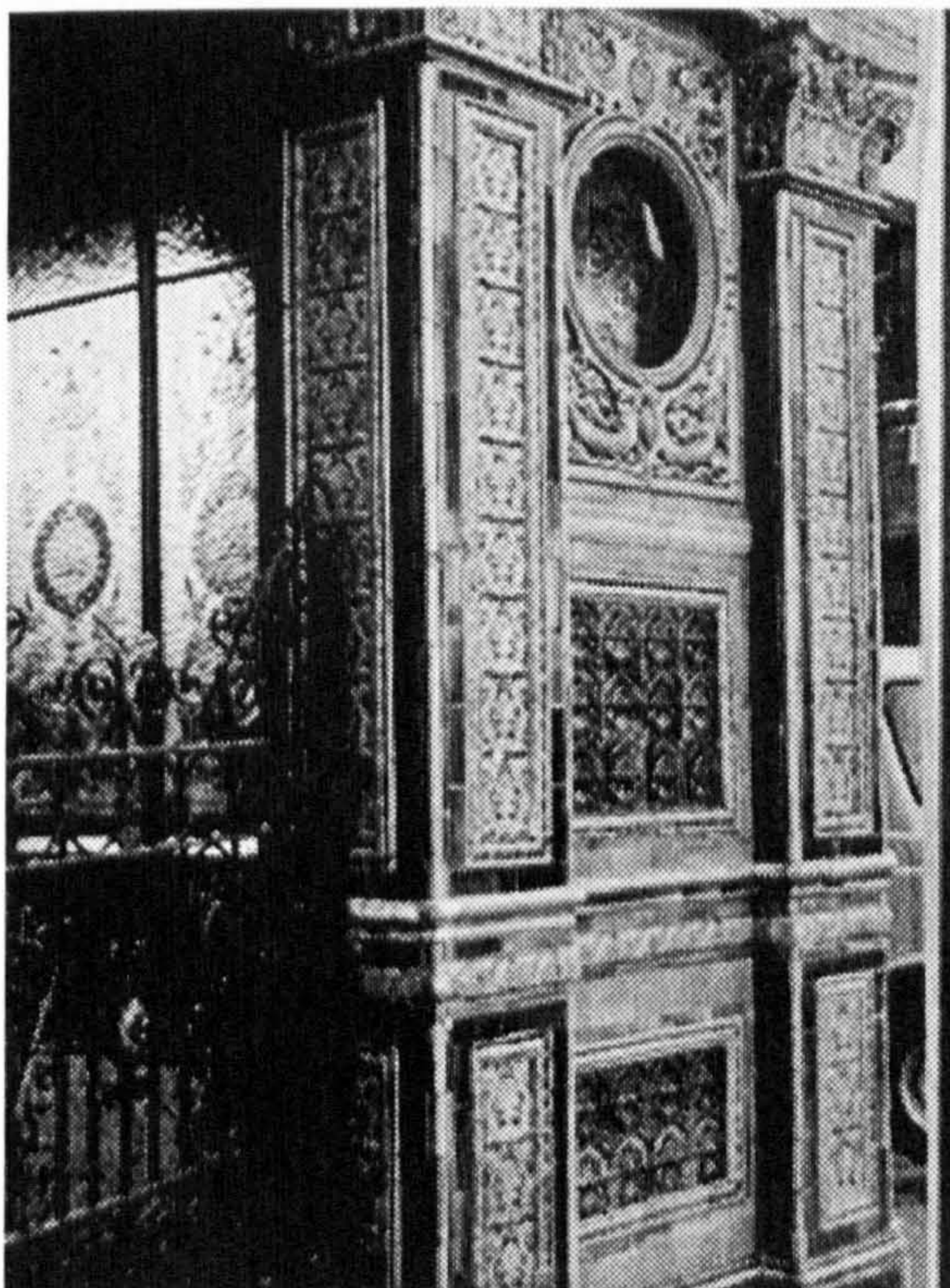


*Tiles from Topkapi
Palace, Istanbul*

The techniques of firing clay were acquired by the Romans after conquering the Etruscans and spread throughout Europe; and by the ninth century the decorative techniques of the Near and Middle East had progressed into southern Spain and France from North Africa in the Moorish invasions. (Barry, 1868; Hamilton, 1978; Plumridge & Meulenkamp, 1993)

The late 19th century to the early part of the 20th century was a key period in the history of architectural ceramics, having produced some outstanding examples of terracotta and brickwork. With many surviving examples easily accessible in city centres throughout the UK, most of the examples and illustrations throughout this section have come from this period, and these buildings have also been the main source of imagery

The Crown Bar, Belfast



and influence on the practical element of this research project.

It is interesting to compare the use of architectural ceramics at the end of the last century, at a time of technological advances and of interest in reviving past styles of architectural ornament, with the end of the twentieth century. Barnard (1973) states that there are similarities between the periods at the end of the 19th and 20th centuries: an eclectic approach to imagery and styles, an interest in using high quality natural building materials and a renewed enthusiasm for art in architecture.

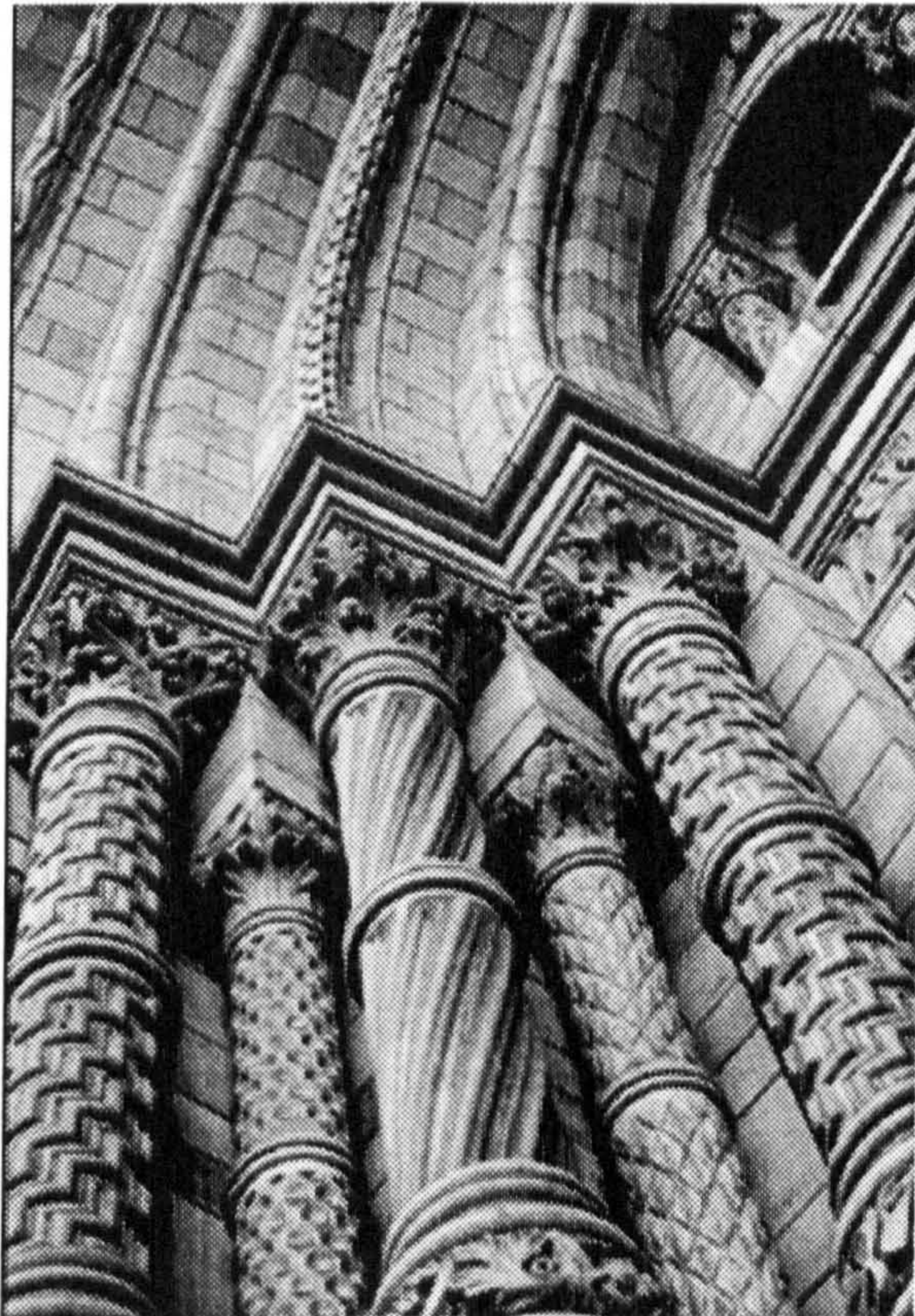
2.2.3 Different types of architectural ceramic

In this project architectural ceramics refers to ornamental facings and details and historically there were different categories within this term. The following is an outline of the main areas of architectural ceramic that will be referred to throughout this section. (The basic definitions are contained in the glossary of technical terms in Appendix 2.)

- **Terracotta and faience**

In most texts terracotta covers both unglazed and glazed ceramic (not necessarily red clay) and moulded brick unless where an article concentrates specifically on glazed material which is known as faience.

*Natural History
Museum (Waterhouse,
1881)*



The subject is examined in depth from a historical perspective by Stratton (1993), who describes the circumstances at the end of the 19th century leading to a revival in interest in Italian Renaissance terracotta relief: travel, economics, technical

advances. This is a particularly useful text as it identifies parallels between this period and the present day and as such provides an excellent context for the contemporary practitioner. For the Victorians, terracotta ornament epitomised the successful combination of science and art; being both functional and aesthetic. This was a re-occurring theme in the architecture and ethos of South Kensington which became a centre of learning after the Great Exhibition (1851).

Along with numerous articles in early issues of "The Builder", a key historical sources of information have been "Architectural Pottery" (Le Fevre, 1900), translated from the original French, which is both a historical overview highlighting key makers and a manual for practitioners covering glazes, clays, firing etc.; and although the book is almost a hundred years old, most of the information is still applicable today. Another is Hasluck's "Terracotta Work" (1905); again this might seem out of date but as a handbook for makers of terracotta with step by step guides to moulding, making and firing this book is invaluable, as well as an insight into the original processes, it also shows how they have changed little over the past century.

• Coade stone



*Caryatid porch, St
Pancras Church,
London (1819-21),
Rossi and Bubb*

This was a particularly durable ceramic developed as an inexpensive alternative to stone. It enabled the production of reproductions of Classical statuary (particularly fashionable at the time).

Whilst Coade Stone was in production earlier than the scope of this review, from 1769 to around 1840, it is still an important area of architectural ceramics, both because of its technical achievements and as an example of successful collaboration between a manufacturer and architects e.g. John Soane and Robert Adam.

There is relatively little known about and written on this material, as Kelly (1989)

states, the material was so successful at imitating stone that for years nobody realised it was in fact ceramic. Stratton (1993) and Hamilton (1978) both make reference to the material, but the key texts dealing with Coade Stone, its history and use in architecture are by Alison Kelly in *Apollo* (1978) and *Connoisseur* (1989). Kelly's mainly historical accounts outline the setting up

and development of Coades Manufactory and gives an insight into the architectural fashions of the time that led to the popularity of the material. How it was favoured above stone for its relatively low cost and ease of reproduction of classical antiquities. It also shows how changing architectural styles led to the eventual decline of the material's use. The author gives little indication as to the chemical composition of the clay body, other than to speculate that a constituent part of the formula was likely to have originated from Dorset and was a particularly resilient building material.

- **Ornamental brickwork**



*Ornamental brickwork
doorway (detail), Victoria
& Albert Museum*

As outlined earlier, brick has been used for thousands of years. As with terracotta, the subject of brick, both as a structural and a decorative building material, was discussed in detail in "The Builder" from the middle of the 19th century onwards, but there was less debate over the 'morals' of its use in comparison to terracotta. In his introduction to "Architectural Brickwork" (1990) Jenkins states that Pugin led the revival of the use of polychromatic brickwork and even Ruskin approved of its use in "The Lamp of Truth" (1849),

"...there is no reason why it should not be moulded into diverse forms. It will never be supposed to have been cut and therefore will cause no deception; it will have only the credit it deserves."

Plumridge and Meulenkamp (1993) overview the use of brick as a structural and decorative material, from its earliest use, to its modern application as integrated art in architecture as well as discussing the practical aspects of bonds and installation. The authors combine a historical survey on the development of the

use of brick to the present day with more technical information describing specialist applications of the material in contemporary contexts. Included in the historical overview are contemporary examples of the use of brickwork in a more sculptural application by artists such as Walter Ritchie. The authors predict an increase in the use of brick as a decorative medium for the integration of colour an ornament within contemporary architecture.

2.2.4 Architectural ceramics as functional ornament

At the height of its popularity, terracotta was seen to be the solution to every conceivable building problem from fireproofing to the latest fashion in decorative cladding. A historical account of a lecture given to the Architectural Association states:

“In glazed terracotta was to be found the *panacea* for all the evils which caused the failure or the ill-success of our modern London architecture. Victorian architecture relied to a very great extent upon colour for its enrichment and for its effect. At present the costly city banks, public buildings, and warehouses had, after a few months of splendour, fallen prey to soot. If however, good terracotta were used, it would defy our climate, and at the same time, preserve that good rich colour which our architecture so much wanted.” (Redgrave, 1868)

Many of the positive aspects so enthusiastically promoted were discredited over the course of time. This section aims to examine the role of ceramic as both a functional and decorative material in order that comparisons may be made at a later stage with its current role.

2.2.4.1 The revival of interest in ceramic for architectural ornament

As mentioned in an earlier section, there was a revival of the use of terracotta in architecture which reached a peak in popularity in the late 19th century both in the UK and in America (Stratton, 1989, 1993). This was largely inspired by a revived interest in Italian Renaissance architecture (Adams, 1928) coupled with a

need for a resilient, ornamental material. Although these are historical surveys, the author reflects on the role of terracotta both in terms of its physical attributes and its aesthetic qualities and its possible decorative applications to contemporary architecture.

He sets out the main practical reasons underlying the widespread adoption of terracotta in architecture at this time as being a major concern with the effects of soot and smog upon brickwork, fire prevention and the expense of stonework. These and other positive aspects of the material were also emphasised in publications of the time, e.g. “The Builder” and “British Clayworker”.

2.2.4.2 Practical aspects associated with architectural ceramic

The physical attributes and qualities of ceramic were often seen, certainly from the point of view of architects and builders, to be the most important aspect of a building material and when terracotta started to be widely used, it was these practical aspects that were promoted.

In terms of a context for practitioners working today, as the material has basically remained unchanged, it is interesting to see how ceramic could be hailed as the solution to all building ills in the mid 19th century and then become discredited, both on practical grounds and due to changing fashions. Examination of the practical qualities and the faults that occurred in the past, should highlight advantages as well as possible pitfalls in using ceramic ornament in contemporary architecture.

The following is an overview of the qualities perceived in terracotta and decorative brick at the height of its popularity in the late nineteenth century:

•Cost -

After the repeal of the brick tax in 1850 (Henderson-Floyd, 1989), the cost of large moulded terracotta blocks and ornamental brickwork decreased, making it comparatively cheaper than quality stone. In general, any cost advantage depended largely on the designer knowing how to exploit the qualities of the material, such as, intricate work being easily moulded to produce large numbers of one design. "The more elaborate the design, the greater the economical advantages of terracotta." (Worthington, 1894)

•Cleanliness-



*Terracotta Doorway,
Essex St, London*

This was one of the main attributes used to promote the use of terracotta in buildings, the theory being that the soot that accumulated on stone buildings, destroying their intended visual impact, would on a terracotta building "be washed by every rainstorm and may if necessary be scrubbed like a dinner plate." (Henderson-Floyd, 1989), or occasionally be cleaned using a fire hose. With the passage of time it became apparent that the dirt did not wash off but tended to build up on the fired surface, although to a lesser extent than on stone. Attempts to clean buildings using the wrong methods, e.g. with

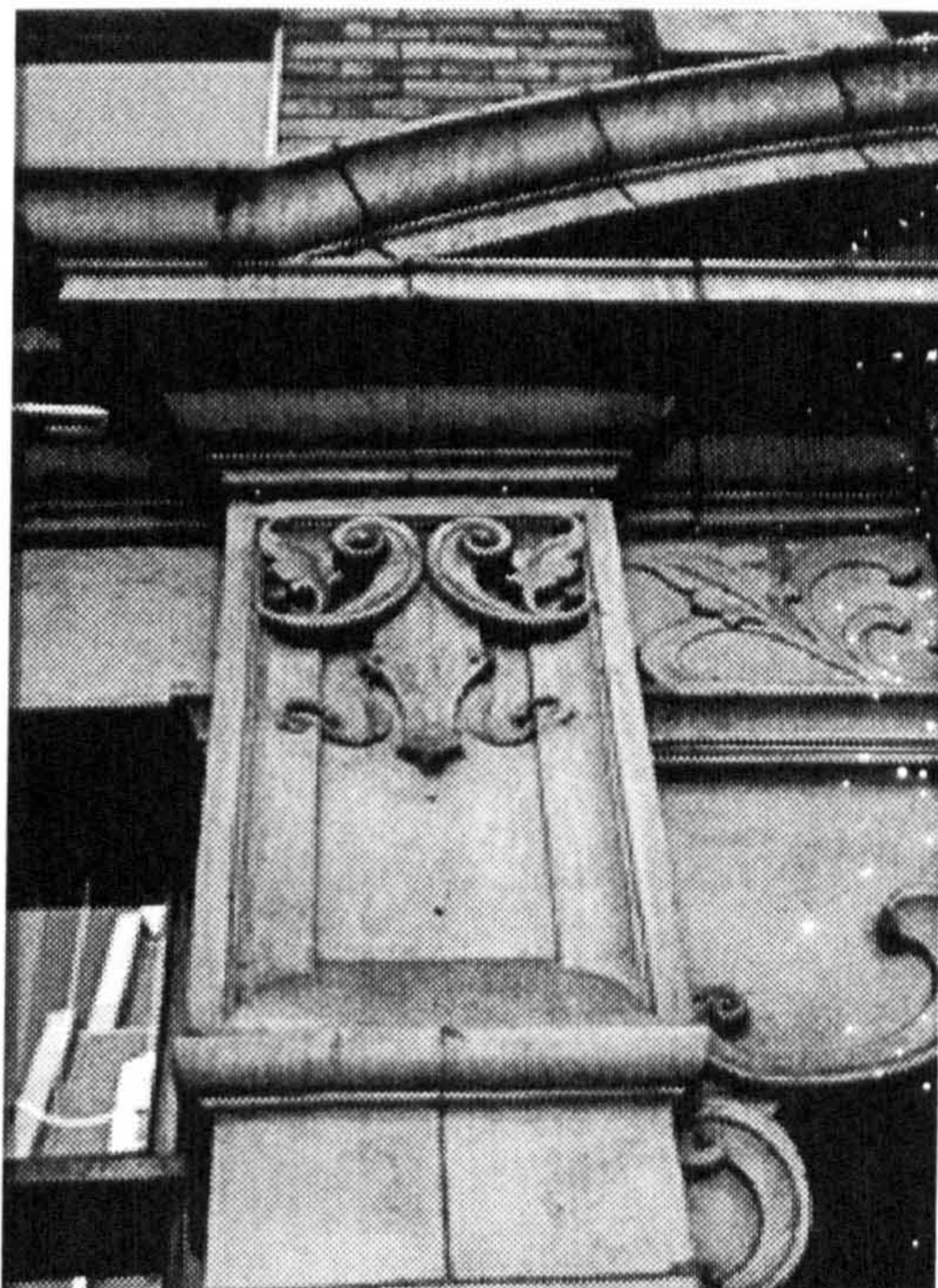
sandblasting or acid, resulted in damage to the surface, or "fire-skin", of the terracotta making it less resistant to frost and further pollution. The best method of cleaning has since been found to be water and a mild detergent (Smith, 1990).

•Fireproofing-

Particularly in the United States, (especially after major fires in Boston, Chicago and San Francisco), terracotta was hailed as the solution to the fireproofing of large buildings. (Henderson-

Floyd, 1989) Hollow-formed terracotta blocks were used as exterior cladding for the new steel structured sky scrapers and warehouses and was also used in floors and to encase cast iron pillars which were liable to split, or even melt in a fire. A disadvantage was that, when cooled suddenly with jets of water in the event of fire, ceramic panels tended to crack and collapse. In the UK brick arches and later concrete were favoured as being a more versatile and cheaper measure. (Stratton, 1993)

•Weight-



*Detail terracotta
cladding, Gray
St. Newcastle*

Hasluck (1904) quotes the weight of terracotta as being:

“...about 4 tons per 150 cub. foot, this being approximately about one-half the weight of the lightest building stone; but the practical difference in weights is increased by the system of using hollow blocks.”

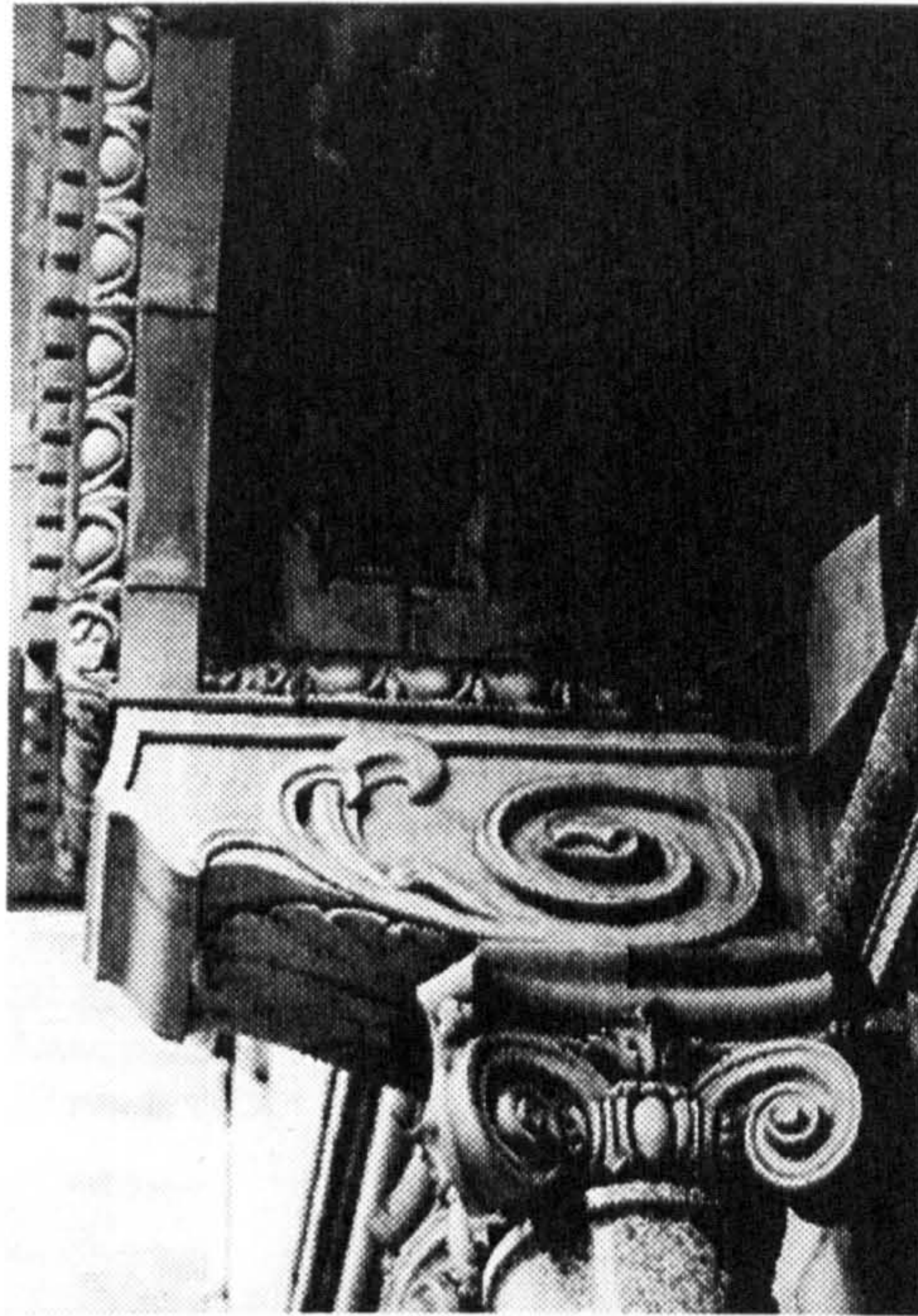
The lightness of ceramic cladding and blocks in comparison to stone was a major breakthrough in the solution of skyscraper design which changed the face of American cities such as Chicago and Boston. It allowed architects such as Louis Sullivan a structural material that could be manufactured and erected quickly whilst having the potential for ornament to be incorporated.

•Imitation of stone-

Glazes were developed which could successfully imitate most types of stone such as granite, marble or Portland stone. This was very often used above the first floor level of buildings, to give the impression that the building was entirely faced in a more expensive material. This application of terracotta or faience was despised by Ruskin (1849) who regarded it in his

essay “the Lamp of Truth” , as ‘falsity’ of the worst kind, and was also criticised by Walter Crane (1896) as being the “acme of inorganic decoration”.

2.2.4.3 The role of ceramic in architecture: symbolism, colour and integrated ornament.



Detail terracotta ornament, Hartlepool

The study of the role of ceramic as a means of introducing ornament into architecture in the past is important, both to place current practice in context, and to help determine the role of ceramic for contemporary architecture. The practical qualities of ceramic which were so enthusiastically promoted from the mid 19th century continued to have an important bearing on its popularity later in the century and into the next. The aesthetic and stylistic potential of the material became as important an issue as its functional qualities, with the qualities of plastic clay exploited to the full; giving rise to a distinctive organic, voluptuous style

- **The integration of art in architecture -**

The idea was popularised by the Victorians that having art in architecture was mentally and morally uplifting, and as in Greek and then Renaissance times, ornamental details and friezes would bring meaning to buildings and be educational as well as decorative. This was proposed not only for high profile public buildings but also for buildings used by ‘ordinary’ people:- schools, shops and in the home as smaller details. Ceramic was seen as the ideal medium to fulfil this aspiration, being easily integrated into the fabric of the building, being brightly and permanently coloured, being low cost and easily produced. This is highlighted by Brock (1864), an enthusiastic supporter of ceramic and frequent contributor to ‘The Builder’ in the 1860s:

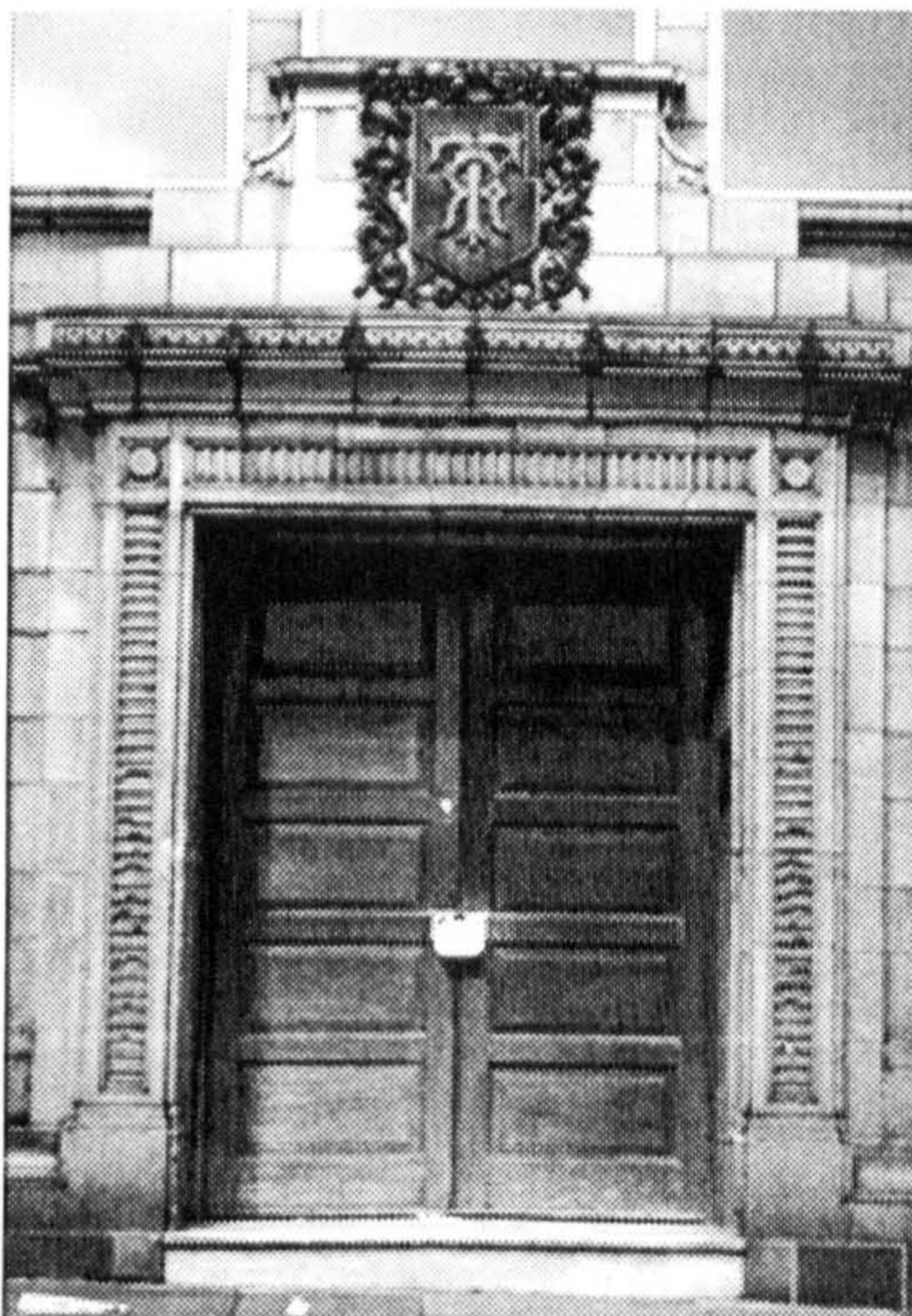
"The study of terracotta was of very great practical importance now as the love of art spread among the people...We might also adopt terracotta decoration in public institutions, such as theatres and concert-rooms, with great advantage and at little comparative outlay, and it would remain and be admired for many generations.We would also suggest that the same idea might be carried out in public schools, where the children should have before their eyes, not dull walls but objects of beauty, by which their tastes would be educated and cultivated". (Brock, 1864)

• Signs and status -

Terracotta was widely used for signs to show the purpose of a building and the nature and status of the business. It was an indication of business confidence that the name of a company was built into the fabric of the building permanently. By the turn of the century a number of retail chains adopted a corporate image using terracotta and faience facing, incorporating company logos and symbols of commerce and prosperity.

*Ringtons Teas,
Newcastle
(Burmantofts)*

Woodbridge, (1991) observes that these are the equivalent of today's logos:



"Company logos have taken the place of the heraldic crests emblazoned on shields that used to proclaim the lineage of firms belonging to the aristocracy of business and commerce. It is interesting to observe how designers addressed this need for status in the days when corporations put their stamp on buildings that they thought they would occupy permanently, in contrast to the short term stake that most now have in the buildings where their offices are located."

Using these elaborate integrated designs, companies such as Prudential Assurance, Burton, The Co-operative Society and the Odeon chain of cinemas, amongst others, used their buildings as advertising; they could literally be 'read'

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MISSING
IN
ORIGINAL**

methods, particularly exploiting the use of repetition which was possible using plaster moulds, along with the smooth surface and flowing lines that could be achieved with such a plastic material.

Increasing opportunities for travel, the Victorian 'Grand Tour', enabled artists, designers and architects to accumulate imagery from an increasing number of sources. The publications of books of styles, most notably "The Grammar of Ornament" by Owen Jones (1849) greatly influenced designers, giving them what was basically a catalogue from which to choose a range of ornamental details.

In the "Decorative Tradition" (1973), Barnard discusses this 'eclectic' nature of the Victorians' imagery, a term which was often used derisively when describing this type of ornament.

"Properly speaking it refers to a school of thinking that selects such doctrines as are convenient or pleasing from other philosophies; an eclectic borrows freely from various sources, untroubled by the scruples of the purist who seeks consistency and originality in thinking. In architectural terms this can be seen as an expression of uncertainty, when the lack of a clearly discernible style that is universally acceptable encourages the designer to imitate the work of other periods and cultures. The Victorian architects, therefore, were eclectic because they used bits of Classical design, bits of Gothic, they borrowed from the Japanese, they imitated the Dutch and so on. They selected those aspects of foreign styles that appealed and bent them to their own purposes."

This approach to design at its worst was despised by many of the Arts and Crafts reformers and eventually gave rise to the Modernist movement with its rejection of ornament entirely.

Both Crane (1868), and Ruskin in his "Seven Lamps of Architecture", (1849) were in agreement that a universal style should be adopted, such as Gothic, which Crane describes as being 'organic':

"One cannot separate the decorative features of a Gothic building from its structure. It is an organic part of it, as the leaves and flowers are of a tree".

Barnard, (1973), summarises Ruskin's philosophy of ornament and style, that it should originate from nature as the fundamental and universal source of imagery. At the same time, opponents of this thinking, such as Voysey and Morris, advocated the use of building materials that were appropriate to their intended function.

"It was generally agreed that ornament was not style, although there was a tendency to regard the accumulation of ornamental details as an expression of style. This was a point that was laboured by Ruskin, He spoke of the necessity for a unified expression of all forms of art that should find its most complete statement in architecture. He had it constantly in his mind that architecture should express some unifying concept that would demonstrate man's harmonious relationship with nature."

Barnard goes on to examine how different building materials including brick and terracotta were considered in the light of these theories.

• Colour in architecture-

As a means of introducing highlights and areas of colour into architecture, ceramic was seen by many as an ideal material. Architects such as Halsey Ricardo were strong supporters of the use of ceramic as a means of permanently integrating colour into architecture and often used coloured faience produced by Doulton. (Irvine,1982).

In his essays, "On colour in the architecture of cities", (1896) and "An essay on colour architecture", (1920), Ricardo advocates the use of colour not just as small details on window boxes, which he regards as distracting to the eye, but in great expanses of "turquoise tiles" which would enhance whole streets emphasising the natural green of trees.

Many of the comments and debates about architectural ceramic in "The Builder" and "British Clayworker" from the 19th century were written for the information of those with a

specialist interest (architects, designers and manufacturers) rather than for general consumption. The published discussions and reports of meetings are written in a much more formal style than in more recent texts, which when read in today's context seem very prescriptive or dogmatic.

*Michelin Building
(Conrans) Brompton
Rd. London
(Doulton)*



2.2.5 The decline of the use of architectural ceramic.

A number of reasons lay behind the eventual decline in use of architectural ceramic. These are identified by Tunick (1989) and Stratton (1993) as being a combination of factors: economic reasons, changes in architectural fashion and the development of new mass produced building materials.

"These new materials were truly mass-produced machine products. They were economical and available quickly in very large quantities. In contrast, terracotta manufacture, requiring hand finishing, time for proper drying and firing, and care in shipping and installation, was too labour intensive and consequently too costly to remain in widespread use. Ironically, in the 1880s, economy was one of the selling points of terracotta. It was labour saving in comparison to the laboriously carved stone ornament that it was intended to replace." (Tunick, 1989)

The influence of European architects such as Van der Rohe and Loos (1908), led to a further decline in the use of ornament, with a preference for clean unornamented lines. Tunick (1989) refers to the innovation of producing thin ceramic slabs by extrusion which, when glazed in plain or metallic colours, were more suited to modern architectural tastes. During the 1930s ceramic had a brief period of popularity as cladding for large shops and cinemas. Slabs of white and coloured faience produced almost exclusively by Hatherware, gave the simplest buildings a monumental, modern appearance whilst the incorporation of elaborate moulded details were designed to make some cinemas look like exotic Egyptian or Oriental palaces, reflecting the escapist nature of the films (Wheelan, 1982).



*Cinema/bingo hall
(1930), Essex
Rd. Islington
(Hatherware)*

The establishment of the modernist style along with need for economically built, mass produced housing after the war, finally caused the demise of the use of ceramic ornament, along with the realisation of the disadvantages of terracotta which appeared as the buildings on which it has been used grew older.

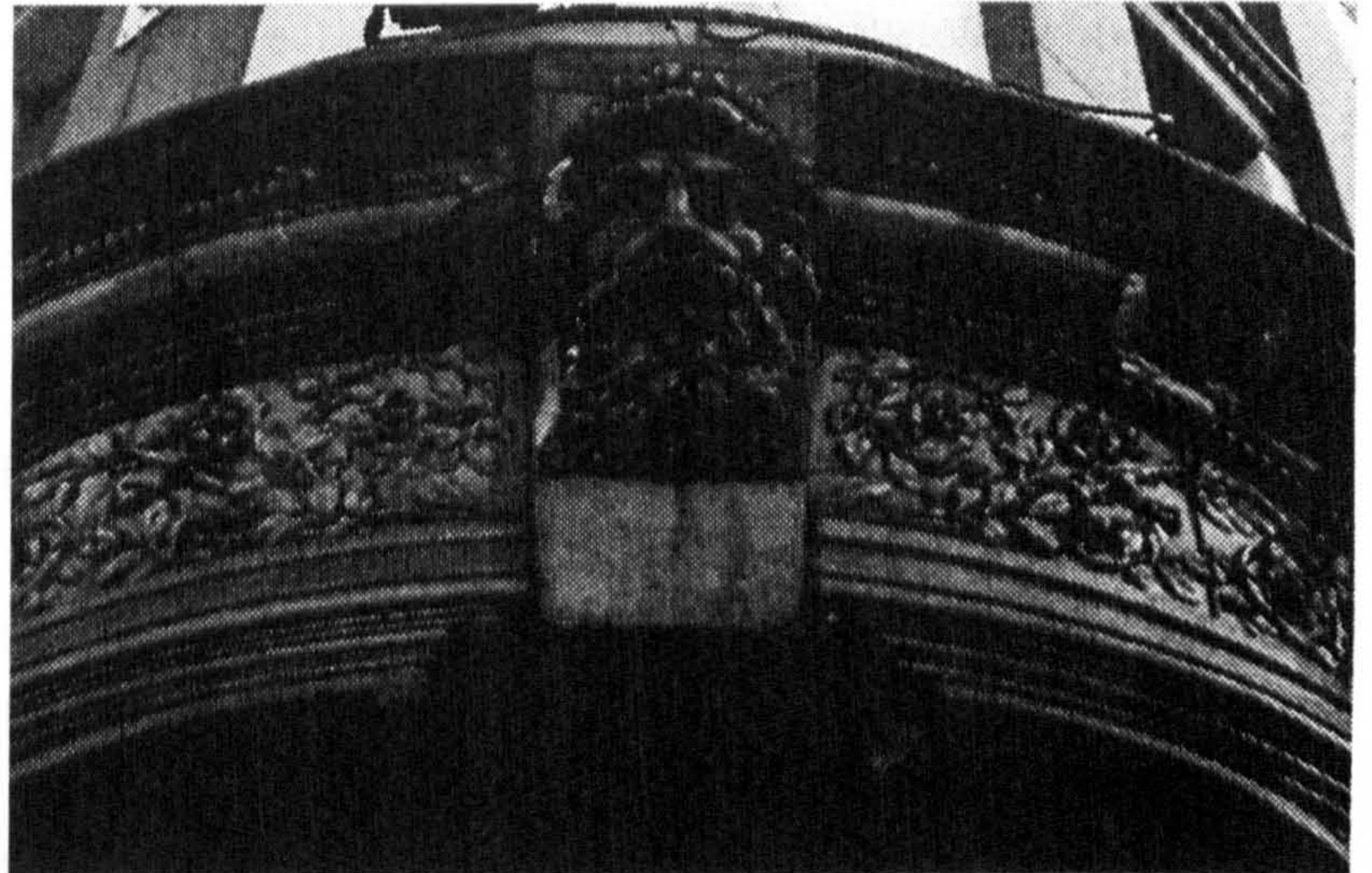
Fisher observes in a technically based article:

“In 1914 terracotta was called ‘the ideal building material of the 20th century’ and well might it have been had our taste for its surface colour and modelling waned with the advent of modernism, and our understanding of its functional problems grown accordingly.” (Fisher 1983)

**Spalling:*

Disintegration of the surface due to water penetration and frost damage

He points out that most of the problems arose due to poor firing which allowed the subsurface salts to rise causing spalling*, whilst another major problem was caused by poor installation allowing water penetration and so corrosion of metal fixings. This largely discredited ceramic as a building material and as a consequence it was not used to any significant extent for almost fifty years.



Badly damaged glazed terracotta pub front, Hartlepool

In the following section the current use of architectural ceramics will be examined in order to establish the contemporary context within which the artist/researcher's practice lies.

2.2.6 The contemporary use of architectural ceramic

2.2.6.1 Introduction

“To consider terracotta relative to architectural design seems timely, because symbolism and ornament are returning to architecture for the first time since the early twentieth century. With this development, new interest has arisen in a building material that has not been widely used since the 1930s.” (Henderson- Floyd, 1989)

As with the historical review, it has been necessary to limit the scope of the subject matter. This section, therefore, has been predominantly confined to contemporary architectural ceramics in Britain and North America, being the major source of visual and written material informing the artist / researcher’s practice. There is much published material relating to European ceramics which can be found through Art Index and through specialist bibliographies such as that produced by the Tiles and Architectural Ceramics Society.

In comparison with the late 19th century, there are relatively few texts published on the current use or role of architectural ceramics. The most relevant and informative contemporary texts exploring the potential of architectural ceramic were found to have been published within the last ten years, coinciding with an increased awareness of the value of ornament and art for architecture and the implementation of Public Art policies in Britain and the USA. The majority of this material was found in American ceramic and architectural journals, which aimed at a variety of levels of specialism, ranging from highly technical information and product specifications for architects, to reviews of community mural projects and tile collecting. Of the specialist ceramic journals the most useful was found to be the American *Ceramics Monthly* which contained many more references to large scale and architectural ceramics than did its British equivalent, *Ceramic Review*.

The content of the articles and their relevance to the research project differed depending upon the specialism and perspective of the author and intended reader (historian, practitioner, architect, technical specialist or critic). However there were

similar themes: a general feeling that although ceramic had gone out of favour, this was due to problems arising from poor installation and maintenance and that with better materials and knowledge, along with the revival of interest in architectural ornament, ceramic remains very suitable for application to contemporary architecture.

2.2.6.2 The historical perspective on current architectural ceramics

Most of the material found written from a historical perspective, centred on the 19th century as one of the key periods in the history of architectural ceramic and uses this as a precedent for the use of ceramic in architecture today. Authors such as Henderson-Floyd (1989), Stratton (1993), Tunick (1989) who are mainly concerned with the history of architectural terracotta, write also about the role of ceramic in contemporary architecture and how there appears to be a slow but steady growth in interest in the use of ceramic in both the preservation of old buildings and in new projects. Tunick, as a practising ceramicist based in New York is particularly enthusiastic, and suggests two major reasons for this renewed interest in ceramic:

“First, the recognition of our architectural heritage through the field of historic preservation has led to a great interest in enlightened restoration and maintenance of older buildings. A second factor leading to terracotta’s growing popularity is the reintroduction of colour, surface pattern, and ornamentation into today’s architecture. After many years of steel and glass structures, architects are now using a wider range of materials and have also begun to incorporate many rich and varied elements into their buildings. This has led to an exploration of the unique options that terracotta offers.” (Tunick, 1989)

The establishment of two organisations in 1981: *Friends of terracotta*, in the US (of which Tunick is currently president) and *The Tiles and Architectural Ceramic Society* in Britain is an indication of the increased amount of interest in architectural ceramics in recent times. Whilst their aim is mainly to encourage the conservation of historic terracotta and tiled buildings, this also helps to draw attention to its potential use in modern

buildings. Stratton, specialising in the study of the revival of terracotta in the 19th century, places this in a contemporary context by observing that the two remaining commercial manufacturers of architectural ceramic in Britain: Shaws of Darwen and Ibstock Hathernware (near Loughborough) are seeing a revival of interest in their products. This is confirmed by the manufacturers themselves who in publicity material report a growing number of sales of both glazed brick and terracotta for new buildings as well as for restoration. (Hollis & Moffat 1992; Smit 1991)

2.2.6.3 The perspective of practising ceramicists

As this research project has been centred around the actual making of ceramic features for architecture, some of the most constructive information was found to be written by practitioners for practitioners.

A key text in this respect is “The Manual of Architectural Ceramics” (Hamilton 1978). Aimed at people with an informed interest in ceramics, practising ceramicists and students rather than historians, the book gives practical information on the different types of architectural ceramics, their industrial manufacture and application to studio production, and whilst each area is not discussed in excessive detail it is a good starting point for further specialist research. Illustrations of examples of architectural ceramics in situ, along with an introductory historical overview, help to place the specialism within a broader historical context, whilst photographs of making methods show that, although centuries old in some cases, they are still applicable to the ceramicist working today.

Hamilton, in his introduction, sees a potential for a greater use of ceramic in contemporary architecture and that this type of embellishment should not be considered an afterthought to a building:

“There have been many occasions in the past (and some of these not so long ago) when ‘decorative ceramics’ meant more than just the trading of fancies, when it was integrated into an architectural

activity concerned with the visual quality as well as the economy of building. Some of the heroic work of the past may serve as a beacon to those who recognise that decoration is not synonymous with depravity or decadence but is striving for the humanity in architecture which should be the motivating force in any building design.” (Hamilton, 1978)

As a practitioner, Hamilton is optimistic for the future of architectural ceramics seeing potential for a revival of its use to embellish buildings and a ‘Percent for Art’ policy as the best means to bring this about:

“...In this situation ceramics is an ideal medium providing for enormous variety of surfaces and durability. There are encouraging indications that among architects and planners these qualities have aroused an increasing interest in the use of ceramics in architectural environments.” (Hamilton 1978)

Having been written in 1978, this book may initially appear somewhat out of date as the author can only speculate about the role that ceramics might have in contemporary architecture and the funding mechanisms for bringing it about. However, it is useful to compare with the present time, Percent for Art having been established in 1988 - ten years after the book's publication - to assess its impact with relation to architectural ceramics and to what extent, if any, the nature and role of architectural ceramic has changed in almost twenty years.

A good general overview of the current state of architectural ceramics in the United States was found to be a specialist feature in the American journal “Studio Potter” (1989) which centres on a survey of contemporary architectural ceramics in the USA, the aim of which is “to emphasise ceramics designed for function...clay tiles that serve as an integral component of architecture rather than tiles seen primarily for their aesthetic value.” to demonstrate the diversity of work being made for architectural environments and hence the versatility of the material.

As with Hamilton's book, the history of architectural ceramics up to the present day is reviewed, with authors Tunick and Henderson-Floyd identifying key stages and figures within this history, which then enables the current practice to be seen in the

context of an ongoing tradition. These articles have been reviewed in the previous section but it should be reiterated that both are extremely useful in concisely showing the historical precedent of the revival of ceramic as architectural embellishment and perceiving a need for such embellishment today.

“To the individual who appreciates abundant ornament, the architecture of recent decades has left a spare, even austere line of buildings devoid of both colour and detail. But there is still pleasure to be gained by seeking out the architectural styles of the late nineteenth and early twentieth centuries...above hastily modernised facades lie vast and varied displays of exotic imagery, colour and texture.”

(Tunick, 1989)

The work of twenty artists is reviewed in the survey: most of the work is based on tiles or low reliefs with the exception of carved brick and mosaic, while the feature also covers other important aspects of architectural ceramic, restoration / new design and the installation of large scale architectural ceramic. These are of greater interest and use to a specialist in architectural ceramic as they are concerned with practical problems which are encountered when designing, making, drying, firing and installing ceramic work as well as with design processes.

2.2.6.4 The development of imagery

Ceramicist, Peter King, specialising in large site-specific ceramics and based in Florida has written a number of informative articles on his own work and on practical aspects of designing for and carrying out commissions for architectural ceramics. In “Clay Carpentry” (1992), King identifies a problem in defining architectural ceramics, as large scale work is often presumed to be architectural. The author sees it as the newest field in studio ceramics, differentiating it from architectural details produced by or in a factory. A step by step account of a large commission for ceramic architectural features (entrance, floors, fountain and window surrounds) demonstrates how the work was designed and made. It is both useful to see how

another professional works and also to see the layout of a large project, how different tasks are divided and fit into a set timescale. Throughout the account, King emphasises the importance of retaining a sense of personal style whilst meeting the needs of the building, architect and client and to look to the tradition of architectural ceramics as a starting point for new design.

“Architecture has evolved by building on its past. Each successive style has drawn on elements of previous styles. Artists and crafts-people today should not deny, imitate or be intimidated by the past. Rather, they should draw from it, add their own insight and inspiration and lay the foundation for a new tradition.” (King, 1992)

In order to try and draw attention to the possibilities of the use of ceramics in contemporary architecture there have been a number of competitions and exhibitions, held, again in the USA. “Terracotta Past to Present” (Rastorfer 1987), describes a sponsored competition for new modular terracotta designs that could be incorporated into different kinds of buildings. From 110 entries of architects, sculptors, industrial designers and ceramicists, six designs were chosen, ranging from labour intensive handpainted decorative tiles to simple extruded shapes: of these, two systems were put into production by Gladding Mc Bean, one being designed by and used on the Los Angeles Museum of Modern Art (Hardy, Holzman, Pfeiffer).

This type of event can be mutually beneficial to manufacturers, designers and architects by encouraging new design for a traditional material through collaboration.

“Developing units that are unique to a particular building is more within the tradition of terracotta than the specification of a proprietary product. Even though, in the past, all the manufacturers of architectural terracotta offered standard pieces, these pieces very often served as the point of departure for an architects one-of-a-kind improvisation.” (Rastorfer, 1987)

A slightly different approach was taken with an exhibition, *Architectural Ceramics: Eight concepts* organised by Washington University Gallery of Art, where artists were invited to explore

the meeting ground between architecture and ceramics today in one of three contexts: a room, wall or entrance (Jensen, 1985). The work was exhibited in a gallery setting immediately removing the work from its intended architectural context, and the author feels lessens the cohesiveness of the show:

“The viewer is invited to consider the works in the gallery as sculptural events in themselves and also to imagine them as part of a larger architectural setting...as doorways, walls and windows they reached out for an architecture to substantiate them.” (Jensen, 1985)

Many of the works were more sculpture in their own right being large free standing entrance features. The criticism is made that this work belonged “in that common setting for sculpture in urban life- the plaza or lobby in which sculpture and building face each other alone.” rather than being designed to be integrated directly into architecture.

The point being made here is that the artist/designer needs to have a closer liaison with the architect in designing work that is truly integrated, there is the implication that the author feels some of the work is unrealistically self indulgent and would not be considered in a ‘live’ project. It would appear that ceramic practitioners need to consider a different approach in making architectural art and what is required in such projects.

“The issue goes beyond the technical and aesthetic. Before they commission a work, architects or owners generally ask for a drawing or a model. Architectural art requires that artists be able to predict the final form of their work with accuracy as well as to complete it on time. It would only be emulating real life conditions to insist that the works prepared for this exhibition answer to the same standards.” (Jensen, 1985)

2.2.6.5 The application of new technology and modern materials

Boston Valley Terracotta based in New York State, are involved mainly in restoration work, the article covers the process of manufacture and emphasises the necessity for collaboration and coordination between contractor, architect and building owner.

**The full range of tests listed in the article would be difficult for a studio based artist to carry out without specialist equipment, although it should be possible to carry out simple absorption tests, it is however useful to be aware of them when carrying out very large exterior work and to seek specialist advice*

What is particularly interesting is how the firm has made use of modern technology to aid glaze analysis and tests* on the clay body, and to improve on the structural aspects of installation by using better grades of steel:

“We’ve taken advantage of contemporary technology to analyse mistakes of the past, and assess why some buildings have failed...We feel we have a better clay body today than the manufacturers did fifty or a hundred years ago. They often fail to meet what are known as today’s standard tests of rates of absorption, freeze /thaw cycles, compressive strengths, thermal expansion, and saturation coefficients. In those days the attitude was you don’t change it until it doesn’t work.” (Krause, 1989)

The author sees a future for architectural ceramic, particularly if clients and architects can see that the material, when made and installed properly, will not fail as it has in the past and can outlast granite and other stone which becomes badly damaged by acid rain. The author goes on to advocate the use of new technology and materials to ensure that architectural ceramic meets modern building specifications and is applicable for new buildings and not just in restoration.

“It offers the architect detail, contour, texture, and colour as well as the advantage of being durable, fireproof, and acid resistant. The new high rises now being built specify stone in their plans...I believe we are in for another cycle of embellishment in architecture...Not that terracotta is anything new, We’ve just made the old stuff better. We’re reintroducing terra cotta to a generation of architects who have forgotten about it. Terracotta can be made cheaper and faster than stone, and with our technical knowledge, can be made to last longer.” (Krause, 1989)

2.2.6.6 The use of brick as integrated architectural ornament.

Whilst there was a noticeable deficiency of current material on terracotta in British journals, there have been a greater number of publications examining the use of brick as a means of introducing ornament, art or colour into architectural

environments. Many specialist publications on bricks and brickwork have been written by and for the industry or product specifications for architects and builders (e.g.. Brick Development Association publications). It has been necessary therefore to select information that is more concerned with the use of brick in a more artistic application.

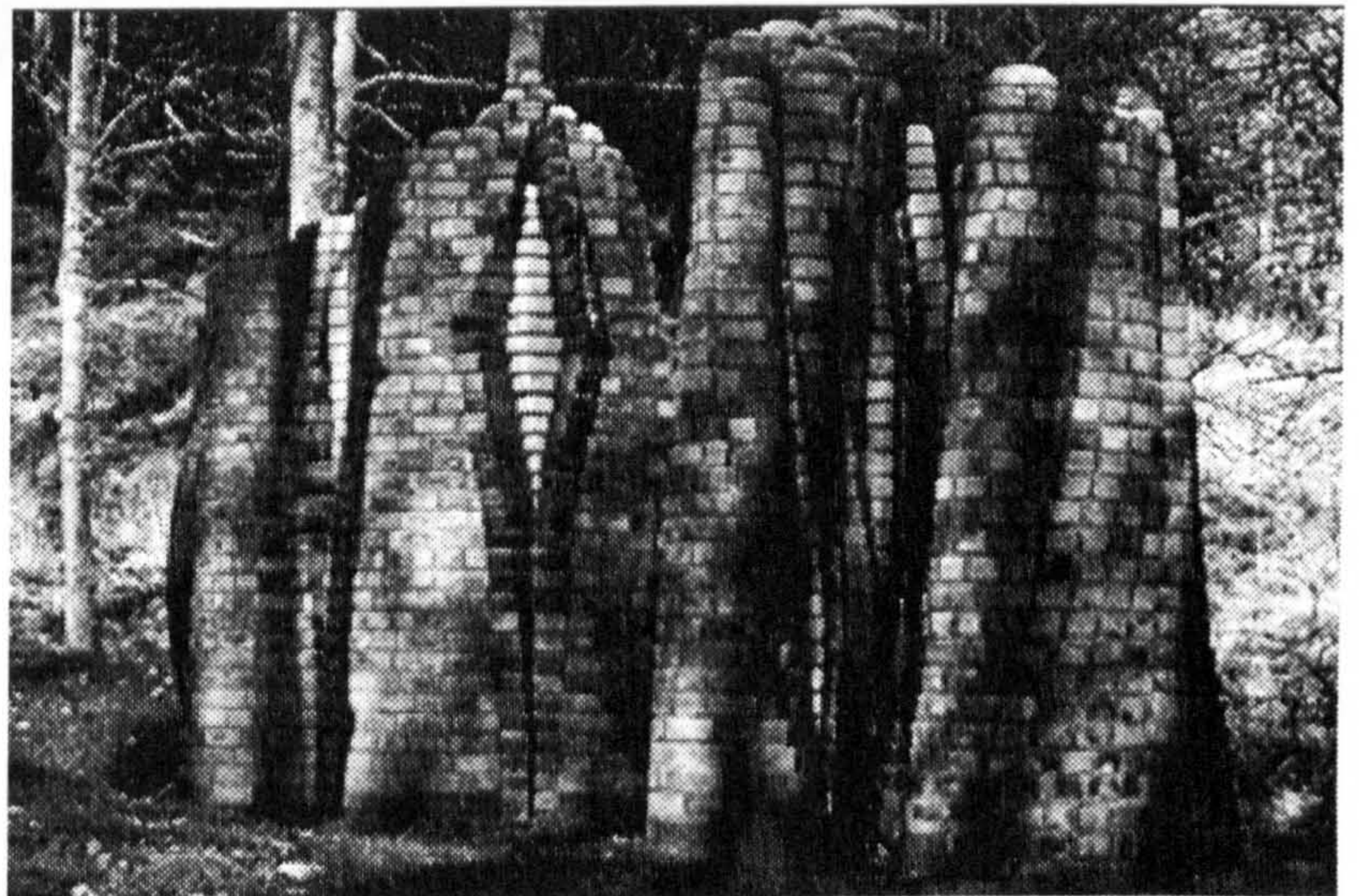
"Brickwork", Plumridge and Meulenkamp (1993), is again a key text in respect to contemporary work and examines the use of brickwork (including terracotta in this term) aiming at architects and ceramic specialists as well as those with a general interest in brick architecture. Using illustrated examples of recent brick and terracotta projects by Shaws and Hathernware along with sited carved brick sculpture by artists such as Walter Ritchie, the authors demonstrate that there is an increasing awareness of the potential of brick, carved, moulded and glazed, as an ideal



*Centenary Square,
Birmingham (Tess Jaray,
1992)*

means to integrate art and details into new buildings. "Decorative and Ornamental Brickwork" (Stokoe, 1982), although primarily a survey of the way in which brick was used as decorative detailing historically, is still a useful visual reference book for artists as it highlights the areas which traditionally have been visual focuses for embellishment within buildings: doors, cornices, windows and walls.

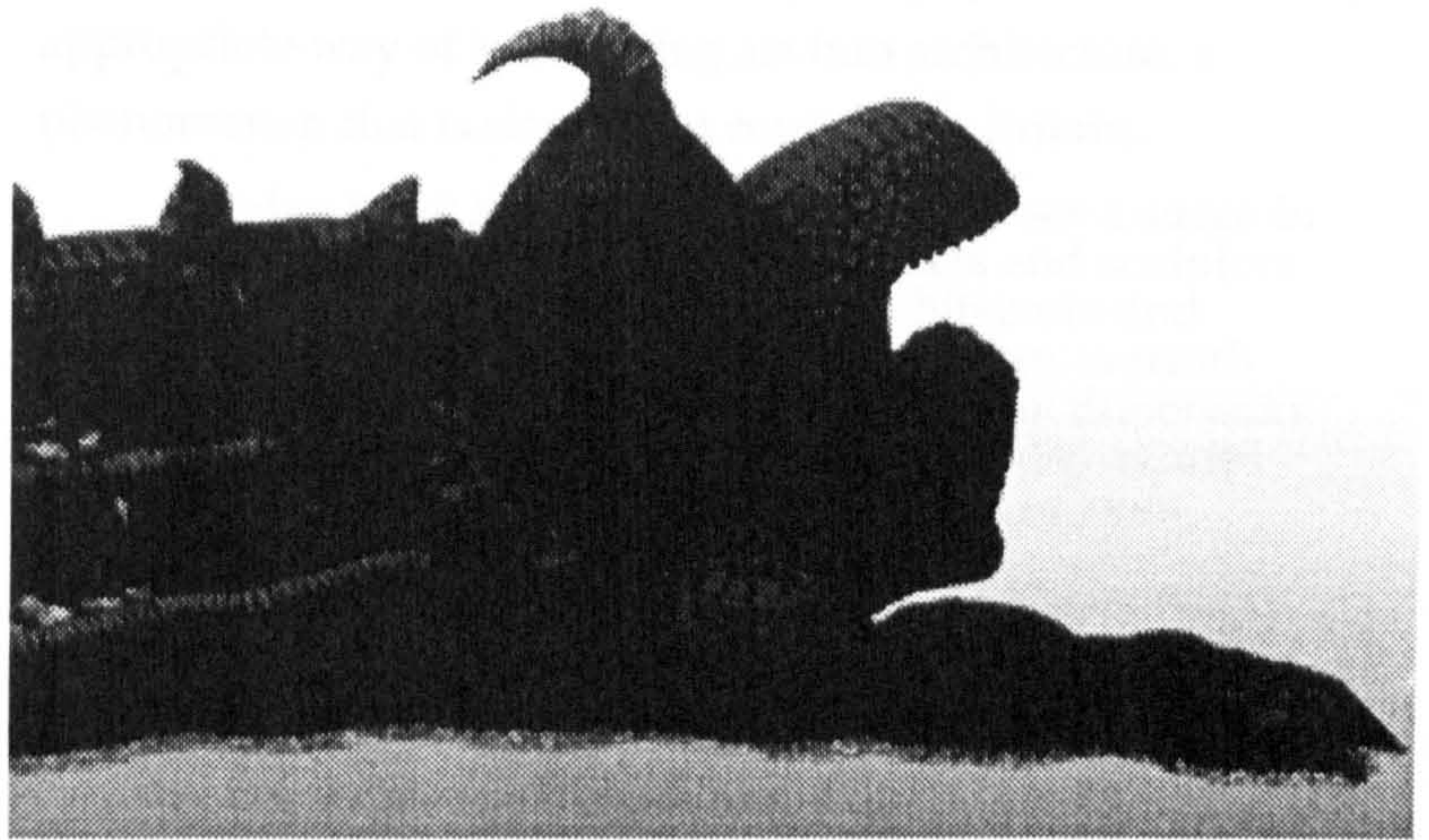
Most of the information found on brick sculpture was in architectural and building journals rather than in art magazines, even ceramics journals did not feature this work, possibly because it falls between the specialisms of sculpture, public art, architecture and ceramic and so is not easily categorised. The exception to this was the occasional photograph in Artists Newsletter in the Public Art section, featuring work by artists such as Gwen Heeney (Jones, 1992), Julia Hilton and Julia Barton who have all worked on large scale site-specific projects using carved brick.



Entrances, Carved & glazed brick. (Julia Hilton, 1993)

“Brick Bulletin” published by the Brick Development Association, is aimed at architects and those within the building trade and brick industry, it has however included articles and features on the use of brick as an artistic medium in architectural environments and on the work of artists currently using brick. These artists use the material in a variety of ways and include Tess Jaray, a painter who designed a decorative paving scheme for Birmingham’s Centenary Square (1993), Rod Harris who carves green brick to make both figurative public sculptures and

*Brick Dragon for
Ebbw Vale Garden
Festival (Gwen Heeney
1992)*



street furniture and Walter Ritchie who has carved fired brick in situ in mainly figurative designs since 1950. In an article in "Landscape Architecture", Ritchie, is quoted on this subject:

"...brick carving is more economical than any other form of sculpture and a sculptural treatment of brick may range from a bold statement to the most delicate detail, affording architectural satisfaction from a distance or under the closest scrutiny... When used for sculpture it is freed from the pomposity that might be associated with bronze or marble. It can be part of the building and appear a natural occurrence rather than a self conscious addition."
(Winterbottom, 1990)

This statement sums up the main reasons for the current popularity of brick sculpture, being modular, it is an easy way to achieve monumental scale whilst being easily and economically integrated into architecture (Williams, 1989). Ritchie's work is examined in greater detail in *Walter Ritchie, Sculptor* (Ritchie, 1994), which surveys his career, featuring carved brick pieces for public and private commissions.

The brick industry appears to be welcoming the opportunity to collaborate with artists, providing materials and technical support, with some firms even employing sculptors and promoting the use of brick sculpture to architects, designers and owners as a new public face of the industry (Geiger, 1991). Geiger sees the use of brick as beneficial to artist, architect and

manufacturer alike as well as being a highly functional and appropriate way of introducing art into architecture, a phenomenon that is clearly not confined to Britain.

“Today brick sculpture is beginning to see a surge in popularity in the US. Many architects and sculptors find the intermingling of brick architecture and sculpture very appealing. Brick’s texture, warmth and rich colours add a new more human dimension to artistic images. Brick’s permanence also assures the durability of the work for decades, or even centuries to come.” (Geiger, 1991)

As working with brick naturally requires the cooperation of the brick industries, this provides the opportunity for artists, industry and architects to collaborate more closely.

2.3 MATERIALS AND METHODS

2.3.1 Introduction

This section focuses on sources of information for the practical element of the research. It is not intended to be a 'pseudo-scientific' study of materials and techniques used in the heavy clay industry, instead it reviews available published material relevant to studio based ceramic art practitioners. Although this project centres on a studio based practice, there were a number of historical and contemporary publications aimed at industrial application (making, glazing and firing of large terracotta pieces) which were useful, as the information was transferable to studio practice.

As in the previous section, the principal historical sources were from the late 19th century with the journals "The Builder" and "British Clayworker" which were invaluable both for information on materials and manufacture and in comparison with current practice and specifications. The overall impression given by these texts was that, with the exception of technological advances in industrial production, there has essentially been little change in the approach to design and

Brick Pillar (Rod Harris, 1990)



making of architectural ceramics over the last century. (This was corroborated by people involved in the brick/heavy clays industry.) With the limited use of architectural ceramics during the past fifty years, many of the traditional skills associated with the manufacture of terracotta have been lost. Therefore, books such as "Terracotta Work" (Hasluck, 1905) were invaluable sources of information on the production of large scale ceramic forms as well as providing an insight into the historical manufacture and application of ceramic in architecture. Aimed at makers in the terracotta industry, it is equivalent to contemporary manuals

based around a series of projects with different levels of difficulty. Using a series of diagrams and illustrations of ceramic architectural details (cornices, pedestals, fountains, etc.) the author shows how to make or mould architectural details which, if not directly relevant to the practitioner today are certainly adaptable for a modern context.

Some of the most valuable information was found in articles by ceramicists who, in describing their own practice, identify problems encountered when designing, making and installing large scale ceramics and offering possible solutions. In this respect, "The Manual of Architectural Ceramics", (Hamilton, 1978) was again a particularly useful general guide to the practicalities of making large scale work. Similarly, King (1992), in describing the process of producing and installing a series of commissioned ceramic features, provides a useful step by step guide to the process of producing large scale site-specific ceramics.

2.3.2 Outdoor Clay

In principle, it is enough for a practitioner to be aware of different types of clay and their relative firing temperatures, shrinkage, strength and suitability to making method. In larger work it is important to use the right type of clay, as the increased scale places greater strain on the work, and so minimise the risk of warping and splitting of a piece during firing or frost damage when installed. Hamilton (1978) describes two main types of clay: the first is suitable for brickmaking and the second a combination of clays which is suitable for the production of tiles, architectural faience and terracotta, porcelain and stoneware. Le Fevre (1900), Hasluck (1905) and Hamilton (1978) agree that the most important aspect of clay suitable for large scale ceramic work is that it has a minimum of shrinkage during drying and firing.

Bennett (1993) states that it is a common misconception that clay must be completely vitrified (i.e. fired to the optimum temperature to prevent any water absorption) in work that is to

be sited or installed outside. The author describes a test for clay porosity developed by the artist David Dahlquist in collaboration with Alfred University. Known as the "C/B Ratio" this represents the room for expansion in the pore structure of the clay. C equals the weight of a cold clay test divided by B, the weight of the same test after being boiled for five hours with the resulting figure being less than 0.78. The advantages of using clays with low absorption was recognised by the Victorians whose terracotta was basically quite porous and protected by the 'fire-skin' (Smith, 1990).

'Grog': (fired clay crushed to an appropriate particle size). "Increases the particle size and the size of the capillaries within the clay body, thus making easier the evacuation of the water from the interior of the clay object." (Hamilton, 1978)

It is recognised that the addition of high refractory clays (e.g. fireclay) and prefired ceramic material ('grog'*) greatly reduces shrinkage in large-scale work and therefore the tendency for the piece to warp and crack in firing.

The addition of combustible materials, such as straw, to ceramic panel and bricks has been a recognised method of strengthening and opening up the pore structure in clay since ancient times (Plumridge, Meulenkamp, 1993; Wight, 1972). Contemporary practitioners such as Rosette Gault and Susan Halls have developed ways of strengthening large slabs of clay for sculptural work through the addition of paper pulp to clay slip (AN, 1995; Art & Perception 1994). Similarly the addition of chopped nylon fibre significantly strengthens clay, enabling large scale works to be produced reducing warping and splitting whilst maintaining the material's plasticity and malleability at the making stage (Bennett, 1993; Kawai, 1982, Gregory, 1990)

Apart from a few accounts by practitioners such as King, (1992), there is little contemporary material focusing specifically on making for architectural situations 2. Whilst Hamilton (1978) and Gregory (1990) describe the main making methods used in industry and by studio based practitioners, the different processes are not examined in great detail. Ultimately, they provide a useful overview which would lead to further research and exploration of an individual process if desired.

Specialist publications are available relating to the manufacture of bricks which are aimed specifically at the brick and construction industries, however there was some useful information to be gained regarding the firing of bricks which was transferable to a studio context (Brick development Association, 1969).

2.3.3 Other research into architectural ceramics

There has been little formal research (M.Phil./Ph.D.) carried out with relation to architectural ceramics. Existing projects have been carried out mainly from an archaeological /architectural history perspective, including studies of Roman tiles and brick (Brodribb, 1983) , Mediaeval tiles (Norton, 1983) and mosaics (Harding, 1984) none of which were directly relevant to this project. The most useful information from a Ph.D. Thesis was on “The Manufacture and Utilisation of Architectural terracotta and Faience” (Stratton 1983) which examined the revival of use of terracotta in Britain and the USA, at the end of the 19th century; the key designers, architects, manufacturers and processes. This, along with Stratton’s subsequent book “The Terracotta Revival” (1993) and lecture given to The Tiles and Architectural Ceramic Society (1994), has been a key text relating to the historical use of terracotta.

In relation to research into contemporary ceramics, there have been no in depth studies carried out to date In relation to ceramics in general, Malins (1992) completed a research programme entailing the development of kiln controlling systems for firing reduction lustre glazes, however this was of little relevance to this project. In a study carried out as part of a research fellowship, Heeney (1991) demonstrated the collaborative relationship between artists and industry by carrying out a major public sculpture made from brick for the Welsh Garden Festival at Ebbw Vale in 1991. Two students at the University of East London are also currently registered for higher degrees researching the use of ceramic in public art and its possible applications in contemporary architecture. Both projects are in their infancy and so there are no outcomes as yet.

2.3.4 Summary

- From the available historical and contemporary information on architectural ceramics there is a consensus that the second half of the 19th century was a key point in the history of architectural ceramics. Its extensive use as a building material that is both functional and decorative sets a precedent for the use today. This was due to increasingly efficient methods of production and greater understanding of materials and firing methods, along with new approaches to design with the revival of past styles and use of imagery and symbolism in architecture.

- The decline in the use of ceramic was due in part to changing fashions in architectural style, with the rise of Modernism, and also to a growing disillusionment with the physical qualities of the material.

- Contemporary texts suggest a revival of interest in the use of architectural ceramics, aided by an increase generally in the use of ornament and art in architecture in public places.

- Brick in particular has found favour with artists and architects as a means to economically and effectively integrate ornamental features into new buildings. This practice is supported by brick manufacturers who see brick sculpture as a new facet to the industry.

- Through the use of modern technology and product specifications, the problems incurred by the material in the past can be avoided, restoring the reputation of ceramic as an appropriate material for architectural embellishment.

2.4 SITE-SPECIFIC ART

2.4.1 Introduction

This section is an overview of the historical and contemporary position of site-specific art and ornament to place the Case Studies within the context of current Public Art policies and attitudes to art and ornament in architecture. It is not intended to be an extensive study, as the emphasis of the research has been placed on the role and use of architectural ceramics. Whilst it has been necessary for the artist/researcher to be aware of current practice within contemporary public art, as it was felt that, as work produced during the research is more aligned with architectural ornament/applied art, this is where the emphasis should lie.

Information was compiled from a number of sources, the most current from art and design periodicals/magazines (e.g. *Art Monthly*, *Artists Newsletter*) and national Public Art conferences. The majority of this review comprises references to material from the last thirty years relating to the current position of art in public, funding policies, imagery and collaboration. Those references that have been drawn from historical texts enabled comparisons to be made between the past and present roles of art in architecture and public places.

From a practitioner's perspective, the most immediately useful information was concerned with the practical aspects of commissioning site-specific art projects: designing and making, funding policies and collaboration. The emphasis of the study has essentially been on these practical aspects, rather than becoming involved in the "sociopolitical" debates of siting art in public places. In addition it has been important to examine the perceived differences between Public Art, site-specific art, community art, architectural art their different agendas. Whilst architectural ceramics is most closely associated with architectural art, this project has involved the production of site-

specific artwork addressing issues common to other materials and arts practices. Due to the breadth of the subject area, this section concentrates on those aspects which have had a bearing on the artist/researcher's practice and this research project.

2.4.2 The historical role of Public/architectural art

Art has been designed for and sited in public spaces and buildings since the earliest times. Sennett (1990) describes how art on buildings and in public places in Ancient Greece was a means of externalising and visualising 'the complexities of life'. The author observes how, in contrast, modern cities conceal this expression within the private house. In the past art in public and architecture was relatively simple in comparison with the current number of definitions of and debates surrounding the term. Its function/role was generally tied in with the nature of the building signifying its use and status of the owner or patron (Woodbridge, 1991).

During the Renaissance the main patrons of the arts were wealthy families (e.g. The Medici) and the Church who commissioned artists and architects to produce work celebrating their power and influence in the city. Art was used as a means of communicating ideas on how people ought to conduct their lives and morals in a less literate age.

"Art in medieval times was used as propaganda: it sought to convince an uneducated populace that their authorities, being blessed with divine wisdom, could be trusted to do what was best for them. The best Victorian public art is a celebration of decorative architectural adornment, the worst a 'wedding cake' glorification of their rulers." (Curtin, 1994)

The author observes that nearly every town or city there is some statue of a monarch, often Queen Victoria, symbolising the supremacy of the Empire .

2.4.2.1 Imagery and themes

Imagery and themes in architectural art was directly linked to the patron, generally the Church or State, and dealt with universally understood themes of good and evil, order and chaos. Both Miles (1989) and Crane (1896) cite Byzantine buildings as epitomising the union of art and architecture and an influence on designers and art movements (e.g. Gothic revival, Art Nouveau, William de Morgan, Klimt) Miles states the importance of this time as a visual union of art and architecture where meaning is conveyed through the ornament and form of buildings in a way that influenced art movements (Eco, 1989) also argues the Middle Ages is a period to which people have generally looked, somewhat nostalgically, as a time of unification of the arts and life. Miles (1989) and Willett (1984) both state that a major problem with public art today lies with the loss of universal themes and symbols in a more 'secular' age and the fragmentation of the arts and architecture- "The disunity of the arts" (Fisher, 1989). Miles, whilst accepting that it is not healthy to constantly look back to the past as a golden age, cites a number of artists who speak of a "lost tradition" in the visual arts and in our culture generally.

"Once there was a tradition in which all things held together, or so it has been said. The allusion is to a world-view in which the aim of knowledge is synthesis and the role of art in architecture to give form to the idea of unity. Is it a myth or history?" (Miles 1989)

Sculpture depicting heads of state and war heroes became commonplace as a means of uniting the country, particularly in the 18th and 19th centuries when the British empire was growing. Woodbridge (1991) states that up until the 19th century the church and state were the principal patrons and subjects of art in architecture. At the start of the industrial revolution industry depended on investors. One way to convince them was

to show business confidence by building central offices incorporating the nature of the business permanently into the fabric of the building.

2.4.3 The decline of ornament on architecture

The legacy of Victorian Gothic Revival and the Arts and Crafts movement served to continue the integration of art in architecture as a matter of course until approximately 40 years ago. Stratton (1993) observes that the decline of ceramics in architecture was largely attributed to developments in the new (and cheaper) mass produced materials produced after the end of the second world war. Post-war building programmes and urban regeneration brought a need for cheap, easily constructed building units for mass rehousing resulting in the decline of art and ornament in architecture generally:

“When the great tasks of postwar reconstruction began, (however), the architects, embroiled in battles with planners and engineers, immersed in the problems of mass production and high technology, were happy to see the artists and poets tidied away to teaching the new and expanded universities. Making art in architecture requires time and effort, and there was less of both to spare.”

(Crosby, 1984)

Barnard (1973) discusses the decline of ornament/art in architecture which lead to the development of the Modernist Movement and refers to the development of a *functional aesthetic* in reaction to the excessive use of ornament and pattern in every conceivable situation.

“That such decoration eventually produced excess is not disputed. but equally it is clear now that the modern movement went too far in the opposite direction. People plainly do not like the kind of architecture that has emerged from the rejection of ornament- the stained concrete hulks, the windy piazzas, the bleak uniformity of pre-cast components...”

As Whiteley (1993) observes, although Modernism and Victorian design are often presumed to be poles apart, the Victorian reformers of design: Pugin, Ruskin, Morris, Jones clearly influenced modernists in terms of 'aesthetico-moral' principles i.e. 'truth to materials' and 'integrity of surface'.

"Modernist designers sought simple and standardized products not only because of the logic of mass-production processes, but also because of their belief that such forms in themselves signified reason over emotion, order over chaos, and even the triumph of man's will over nature. In their unambiguous commitment to industrialism, Modernists wanted their designs to express the machine age through a 'machine aesthetic' that was underpinned by an ideology of scientific rationalism." (Whiteley, 1993)

In architecture the architect became the sole creator with the building itself becoming a complete artistic entity. Therefore all extraneous ornament and detail that was not entirely functional was excluded, in response to the minimalist aesthetic of 'less is more'. Architects such as Loos (1908) took this to the extreme believing that ornament was not only unnecessary, but also a symptom of decadence and a degenerative tendency. Crosby (1984) observes that the Modernist movement signalled the division of the art and architecture professions and that an important source of work for artists-ornament and decoration in buildings- was effectively cut off. The author states that, the legacy of this movement has resulted in further division within the architectural profession: towards technology or academia.

"Innumerable practitioners face an ever-increasing involvement with technology which has few opportunities for craftsmen, so they are trapped in a system with a diminishing capacity for expression. Materials get blander, producers and contractors bigger, regulations tighter and the opportunities for intervention fade." (Crosby 1984)

2.4.4 The re-emergence of art and ornament in architecture

The aims and ideals of Modernist architects such as Le Corbusier, to develop a modern language of architectural design uncluttered by ornament, when translated into mass housing, resulted in the all too familiar concrete tower block and housing schemes of the late 1950s and 1960s. As observed by the previous authors these are exactly the type of environments which gave a bad name to Modernist design and are now largely blamed for the rise of urban decay, alienation of residents and the increase in city centre crime. (Barnard, 1973) This is ironic, considering Loos implied that ornament led to crime.

Pumping Station entrance, Dun Laoraigh (Hugh Lomigan, 1992)



In reaction to this in the last 20 years there has been a growing realisation of the value of art and ornament within the built environment, both to visually enhance public places and buildings, and in its contribution to quality of life (Vine, 1989).

With the rise of post-Modernism in architecture in the 1980s, architects such as Jenkes and Graves attempted to reintroduce the ornament and colour that had been lacking in the austere buildings of the post war years. At best this encouraged people to reconsider the role of ornament in architecture, through the reinterpretation of classical and other styles as the basis of

designs. At worst this resulted in buildings that were a pastiche and mish mash of styles of ornament that were irrelevant to the context to which they were applied. Hence shopping malls included extraneous details and came to look like stage sets of Egyptian tombs or Greek temples. However, a positive benefit of this movement was that it encouraged architects and clients to consider the inclusion of art or ornament in their buildings and the value of this to the public to be readdressed.

2.4.4.1 COLLABORATION

Historically collaboration between artists and architects was taken for granted, whereas today it generally is the exception. Kostof (1988) argues that art/craft and architecture is inseparable and combines to form the whole style of the building. Today architects are encouraged to collaborate with artists, however, except for a minority of examples this is still rare. Jenkes (1984) discusses the need firstly to establish a visual theme for a building which will involve the integration of art and architecture. In *The Thematic House* (London, 1979-82) the author describes a collaborative project with artists such as Paolozzi, where the architecture and art/design was bound up with a visual and metaphorical meaning around a theme. Jenkes state that there is no room given to art in architecture because the architecture is generally considered to be the art (as in the Pompidou Centre). The architect, however, still appears to be expected, and has the power to initiate the collaboration with artists, rather than the reverse. In a series of guides to architects, Ostler and Field (1984) describes the advantages of the inclusion of art in architecture and give practical advice to architects on how best to carry this out. The authors advise that the artist should be included at the earliest possible stages in order that the client will see the art as an integral part of the building.

Moreover, the authors advise that the architect take responsibility for commissioning and supervising the artist rather than included them as another sub contractor.

“It is undesirable to employ artists as nominated subcontractors because they are then subject not only to main contractor’s attendance and profit but also to totally unsuitable contractual provisions bringing them into direct legal relationship with the main contractor.” (Ostler and Field, 1984)

2.4.5 The role of art in contemporary architecture and public places

Today the application of art in architecture and public spaces has grown into a major issue encompassing social, political and economic agendas. Art and design are now seen as an asset to cities and their regeneration; attracting businesses, jobs and tourism to previously derelict areas (Jones, 1992). It is no longer an issue solely concerning artists and architects regarding the application of art to buildings and as public monuments.

As stated earlier (Crosby 1984) after the second world war these two fields effectively separated and consequentially there have been different agendas involved in the re-emergence of art and ornament in contemporary built environment. Two main strands emerge: the sociopolitical agendas of public/community art and a returning of ornament to architecture (Postmodernism)

66-68 Brinkburn Av.
Gateshead
(Keith Alexander, 1991)



The rise of the community art movement in the 1960s and 70s, allied itself with socialist ideals, with the aim of involving the Public as active participants in decision making regarding their immediate environment (Steyn, 1989). Drake (1994) argues that the current public art trend should

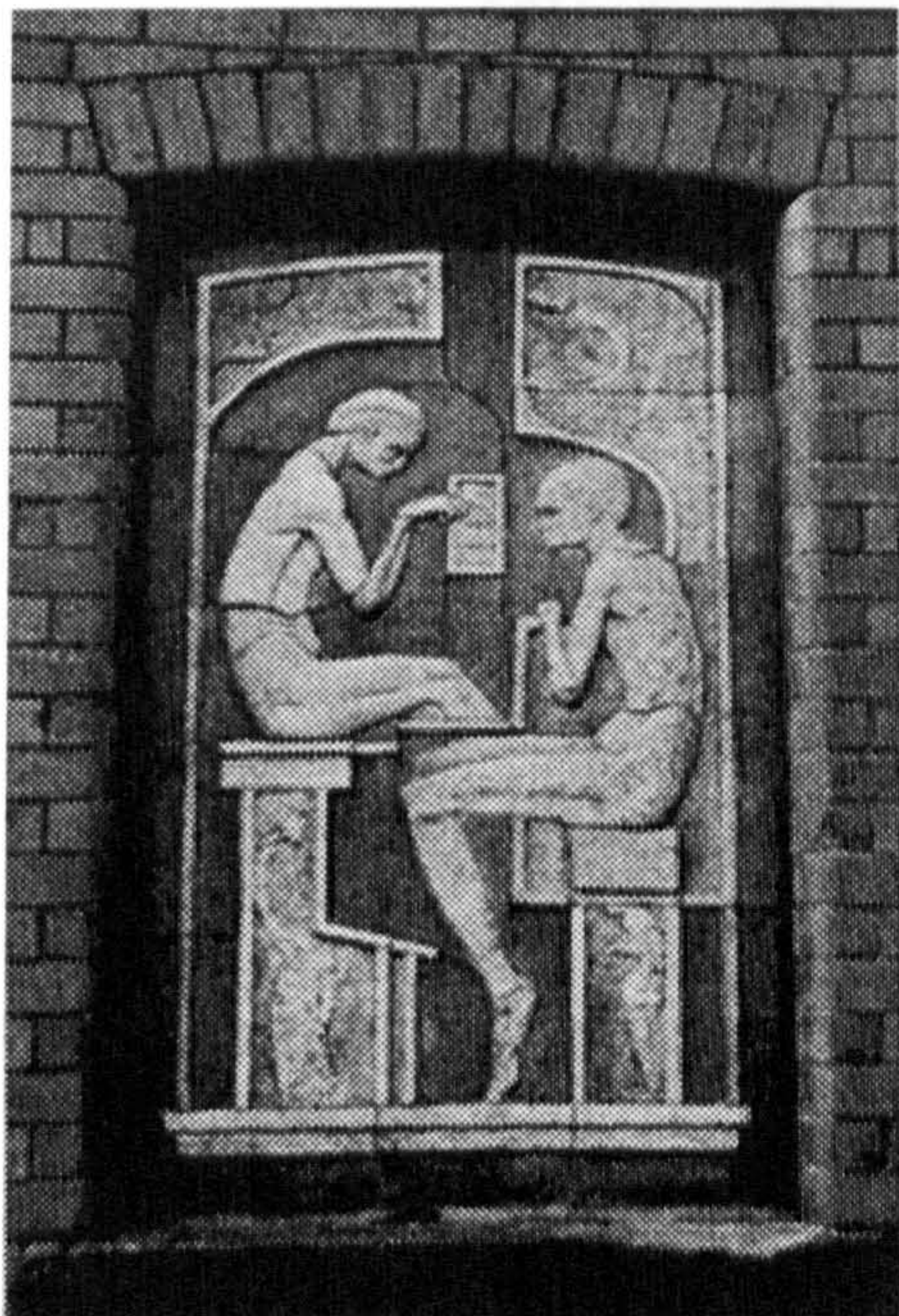
acknowledge community art for paving the way, moving art away from the perceived elitism of the gallery to a wider audience. Artists were placed in residence in New Towns and urban areas designated for regeneration with the aim of producing artworks in liaison with the residents. These served a number of purposes: to enhance the urban environment, to introduce art into education programmes, to bring the public in contact with artists and to broaden the audience for art.

Miles (1984) emphasises the importance of art which is not necessarily tangible and functional :

“Art is imaginative work, giving form to ideas and feelings. These things are too often marginalised in industrial societies. Artists can reclaim those areas of human life and bring them into our cities. In some cases it may be through major monuments, but more often through a wider awareness of visual quality and through a developing sense of place.”

The author then sets out four main reasons for having art in public places. These summarise points which were repeatedly raised in other articles supporting a case for public art.

Ceramic relief panels, Blackness, Dundee (Keith



Donnelly, 1982)

“It gives a sense of place

It engages the people who use the place

It gives a model of imaginative work

It assists in urban regeneration.”

In another publication Miles (1989) makes reference to the Blackness Project, a major urban regeneration programme in Dundee, reiterating that not all art has to be monumental works on prominent sites but is just as viable as series of ‘low key interventions’ in urban renewal projects. There is also a need to integrate the visual awareness of artists with planners, engineers, clients, public etc. and to focus an identity

on places through a combination of artwork, street furniture and new economic influx to show residents that their place matters. In a more recent article Miles (1995) questions this notion of a *sense of place*, saying that this is something that was a concept indicating that a space 'reads' in a special way (making reference to the past, residents etc.)

There has been a steady increase in Public art projects since the early 1980s, particularly in the public sector where art is now seen as a major contribution to the redevelopment of cities Selwood (1995). This "cultural investment" has been embraced as a means of encouraging tourism and investment, increasing land values and attracting industry. The introduction of art and colour into cities and community based activities has been encouraged as a means of reducing the sense of alienation of cities' inhabitants and with it vandalism and crime.

The Winds of Change, Burnley (Biddulph & Woof, 1991)



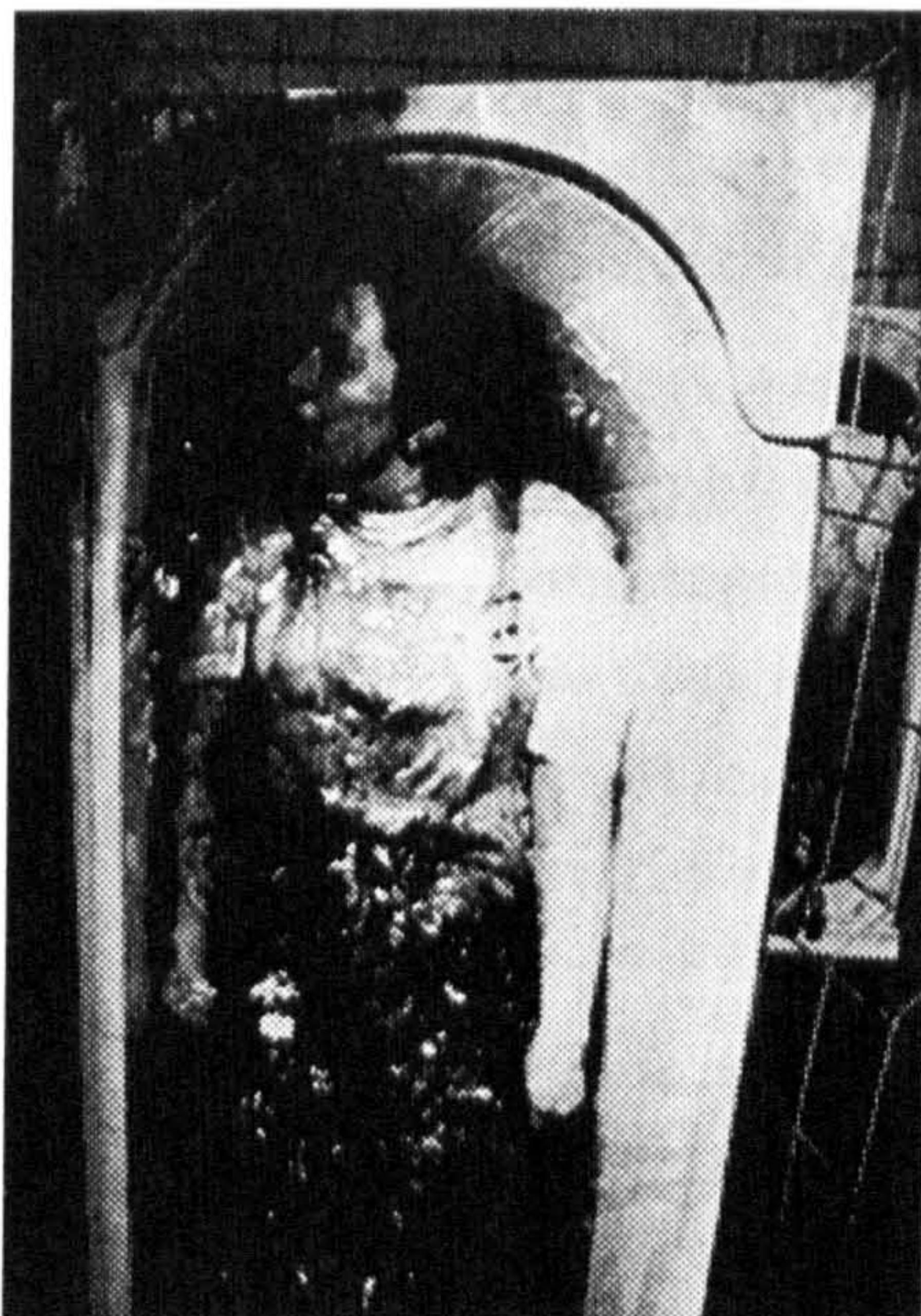
2.4.5.1 Defining public/site-specific art

In her introduction to "*Art in Public*", Jones (1992) states that the term Public art has come to refer to a particular type of work: that which is usually permanent and architecturally defined and sited in city centres and "urban post-industrial locations

undergoing major revitalisation." Jones, in fact, chooses to discard this term as being too confining to the aims of the book. In an essay in the same publication. Selwood (1992) similarly observes that there is no solid definition of Public Art; having been regarded up until the mid 80s as "sculpture in the open air", it is now recognised that it takes more than the site to make a work public. The author observes that covered by this umbrella term is artwork located in relatively inaccessible places: offices, hospitals and schools; artwork for the community (with or without their participation); artwork that is temporary or permanent; political or apolitical; functional or ornamental.

Peto (1992) contests the term Public Art observing that no artwork is truly public, with the majority being located in corporate, private or civic property: "art is nonetheless designated 'public' if it is outdoors, preferably accessible or prominent." That the word 'public' has come to refer to a geographical location highlights a need for this definition as applied to 'public art' and the role of the artist working in this field to be reconsidered.

*"Waste" Photo-graphic installation
(Susannah Silver,*



1993)

2.4.5.2 Art or ornament for public places: appropriateness

With the increase in interest in Public art in the last twenty years, there have been numerous articles, books and conferences discussing the importance of art in public but there has been less examination of the type of artwork that might be appropriate.

Conferences such as "Public Art: the New Agenda" (1994), challenged the notion that any art is better than none in a public place and that art in public and in architectural environments should necessarily be permanent. The use of temporary installation, performance and projected images in public,

usually urban, places is not new; but to be seen as the possible future of Public Art challenges the traditional role of art in public. Walwin (1990) argues that temporary art works are more flexible and experimental than permanent works that may be restricted by legal requirements as well as formal and technical expectations. It is of course a debatable point as to whether any work, even when integrated into the fabric of a building is ever permanent.

Dormer (1989) in an essay from "Art within Reach" observes that there is a need for more consideration to be given to what is actually required for a public space; art or ornament. He suggests that decorative art generally aims less than fine art for personal observation than to provide functional decoration and that it may be more appropriate for a public space to have a fountain as a visual focus, rather than a static expensive sculpture. Ornament is often considered as less valid than fine art and so the author is raising an important point in highlighting the strengths of ornament which historically has been associated with architecture. The importance of art and ornament being *appropriately* used is emphasised by many authors and critics writing about Public art. That is that artwork should not be included in a way that benefits neither the artwork nor the building, and that there should be a reason for including artwork; not just as an afterthought or through some sense of duty.

In "*After Adam*" Dormer (1990) refers in the title to the 17th century architect, whose monumental fireplaces can now be found reproduced, scaled down for the modern house. Dormer sees this as epitomising a current problem of using ornament and art in architecture inappropriately. The article discusses the fact that it is easy to prescribe ornament in architecture as a solution to all problems but that there needs to be a serious rethink as to what is appropriate for today's cities and buildings. For a start the scale of buildings has increased; changing perspectives and areas to decorate, therefore to apply ornament

that was designed for smaller, more organically designed buildings does not work and that the choice of material to carry out such schemes should also be appropriate.

Woodbridge (1991) makes no distinction or value judgments between art and ornament in her book *Details*. In examining the history and use of ornament in architecture she emphasises the historical importance of both sculpture and ornament in buildings to convey meaning to people about the use of the building, the status of the owner etc. The author illustrates how details were used to emphasise and enhance key visual points of the architecture rather than being incongruously located as an afterthought. Miles (1994) suggests that there is a need to “reclaim the decorative”; that for too long this has been considered a lesser art when it is a basic human activity to decorate living spaces, and this notion should be appreciated when considering the introduction of art into public spaces.

From these and other similar articles, it would appear that any differentiation between art and ornament in architecture is subjective and that the choice of the type of artwork depends upon its perceived role or function. A large freestanding sculpture designed to bring a visual focus or status to a corporate headquarters would be unlikely to be as successful or appropriate in a school or hospital. This is not just a question of a difference of scale and content but of the meaning of the work and, by extension, that the building projects.

2.4.6 Evaluation of Public art

Public art has not been without its critics. In an article entitled “Lipstick on the face of a gorilla”, (a reference to a remark that architect Norman Foster was alleged to have made) Dormer (1992) criticises the use of public art as a cosmetic solution to urban decay rather than city councils addressing the root causes.

It also refers to the practice of introducing sculpture as an afterthought to a new building. This type of artwork was placed in a square, in front of a corporate or civic building or attached to the wall of a building; neither resulting in a meaningful or aesthetic union of art and architecture.

Petherbridge (1981) comments on the difference between evaluating 'public art' as opposed to that in galleries- 'private art'.

"Art in the gallery is easy: the only question is whether it is good or bad, convincing or not. Art in the every day context is decidedly uneasy; it poses and has to answer many complex questions and in a curious way even the question of good or bad becomes less relevant, as contingent issues seem to overwhelm it."

The author identifies a need to differentiate between the evaluation of public and gallery art and it is clear from this statement that it is not easy to say how a public artwork is or is not successful as there are many aspects than a subjective aesthetic judgment

Increasing numbers of Public Art and allied courses being established in art schools (and in the University of East London, within the School of Architecture) has provided a wider forum for debate and critical evaluation of the role of art in public. This evaluation has been missing from the Public Art debate (Selwood, 1995) and is generally regarded as necessary if contemporary art in public is to flourish and to maintain its quality and integrity. Miles (1995) also states that for too long art in architecture and public places has been accepted as being a good thing without any appraisal as to its different types and roles and its quality.

"Much public art has resulted from initiatives and campaigns originating within the 'art world', based on an assumption that art is 'good', and that it should be placed in outdoor settings so that more people can see it. This is a curatorial viewpoint which does not ask why art is 'good' or seek to establish 'business' reasons for its commissioning."

These authors, amongst others, have collaborated on a report on the current agendas within Public art in order to try and identify problems within current policies and practice which may lead to recommendations for a new set of strategies for Public art in the future. (Moody, 1995)

Miles sees the problem of there being no agreed or tested method for evaluating public art, and he considers it odd that funding bodies do not require an audit of the outcomes of the budget given to art projects. How this might be done is called into question, and the author makes several suggestions:

- Matching outcomes to objectives
- Observation of outcomes, e.g. responses of the users of sites, which may indicate the use or misuse of the affected site.
- Market research prior to the project to see what sort of site would be most appropriate for artwork to be located.

One difficulty in evaluating this work, he observes, is in identifying an 'audience' and suggests that it may be easier to elicit responses from a selected group such as within the Health Service. This is an area of specialism to the author having written and spoken extensively about Health Care Arts. Petherbridge (1981) ten years earlier stated that both hospitals and libraries are typical of the institutions into which art is invited to "fulfil 'amenity' expectations". Miles (1995) in the same article reaches the conclusion that public places should be thought of as places for enjoyment or "conviviality"; whose users bring with them their own associations ("personal memories") which contribute to the "completion" / success of the site specific art project. The recognition, by urban designers and artists, of this need for *convivial* public spaces rather than those that have been largely designed, albeit beautifully, without consideration for the users could become a basis for evaluation.

“What may emerge is that the criterion for ‘public art’ is not the aesthetic of gallery art, more a holistic concern for conviviality. This requires more than art. It may be that there can be good public space without art... it is precisely in urban design that the artist and crafts person can contribute most to urban life, using their visual and tactile skills.”

This reiterates Petherbridge’s statement at the start of this section that there is a different agenda involved in the judging of gallery based artwork and art designed for public places.

2.5 MECHANISMS FOR BRINGING ABOUT SITE-SPECIFIC ART

2.5.1 Patronage and funding mechanisms

Today it is relatively rare for an artist to be given the opportunity to produce artwork for a wealthy patron who expects nothing other than the artwork to be produced. However, patronage can occur in ways other than in the private sector: Crosby (1984) suggests that if art is going to be successfully incorporated in contemporary architecture, architects will have to assume the role of patron as they did in the past.

Industries have become a potentially lucrative source of financial support or more usually, sponsorship in kind. The provision of materials, facilities, equipment or technical advice can dramatically reduce the costs to the artist of a commission. At the present, manufacturers are happy to provide materials and expertise and even see this as an alternative source of revenue and work at a time of recession. Heeney (1992) States that historically there were links between art and industry as this was the only means by which large casting or public/ architectural work could be produced.

2.5.2 Percent for Art: for and against

In the 1980s Percent for art was seen as the best means of introducing a funding structure for the introduction of art into architecture. Many countries including Canada, the US, Germany and France, as early as the 1950s had successfully introduced legislation ensuring that a proportion (approximately 1%) of the capital budget for new public buildings be set aside for artwork of some kind (Lydiate, 1984). In one respect this was an attempt to quickly introduce elements to enhance building schemes in the postwar regeneration of cities. However many countries embraced Public Art as a symbol of national aspiration, culture and civic pride.

In the UK the Arts Council of Great Britain implemented its Percent for Art Policy in 1988. Its aim was to target local authorities encouraging them to consider the inclusion of art and craft as part of urban regeneration schemes; to create visual focal points in cities, enliven and enhance derelict areas and by doing so to enhance the quality of life for residents and encourage outside investment. This scheme, however, relied on the individual motivation of local authorities to implement the policy, seek public and private sector support and employ a



*'La Creuset de Temps' Paris
(Hubert, 1988)*



*Water Feature,
Manchester (Liam
Curtin, 1995)*

Percent for Arts Officer (Selwood, 1992). Selwood states in an essay in "Art in Public" (Jones, 1992) that although in the late 1980s the aim was to have between 30 and 50 local authorities adopting this policy, in reality by 1990 this target was not met and that only three examples were cited in the Arts Council's "Percent for Art a Review" (Shaw 1991).

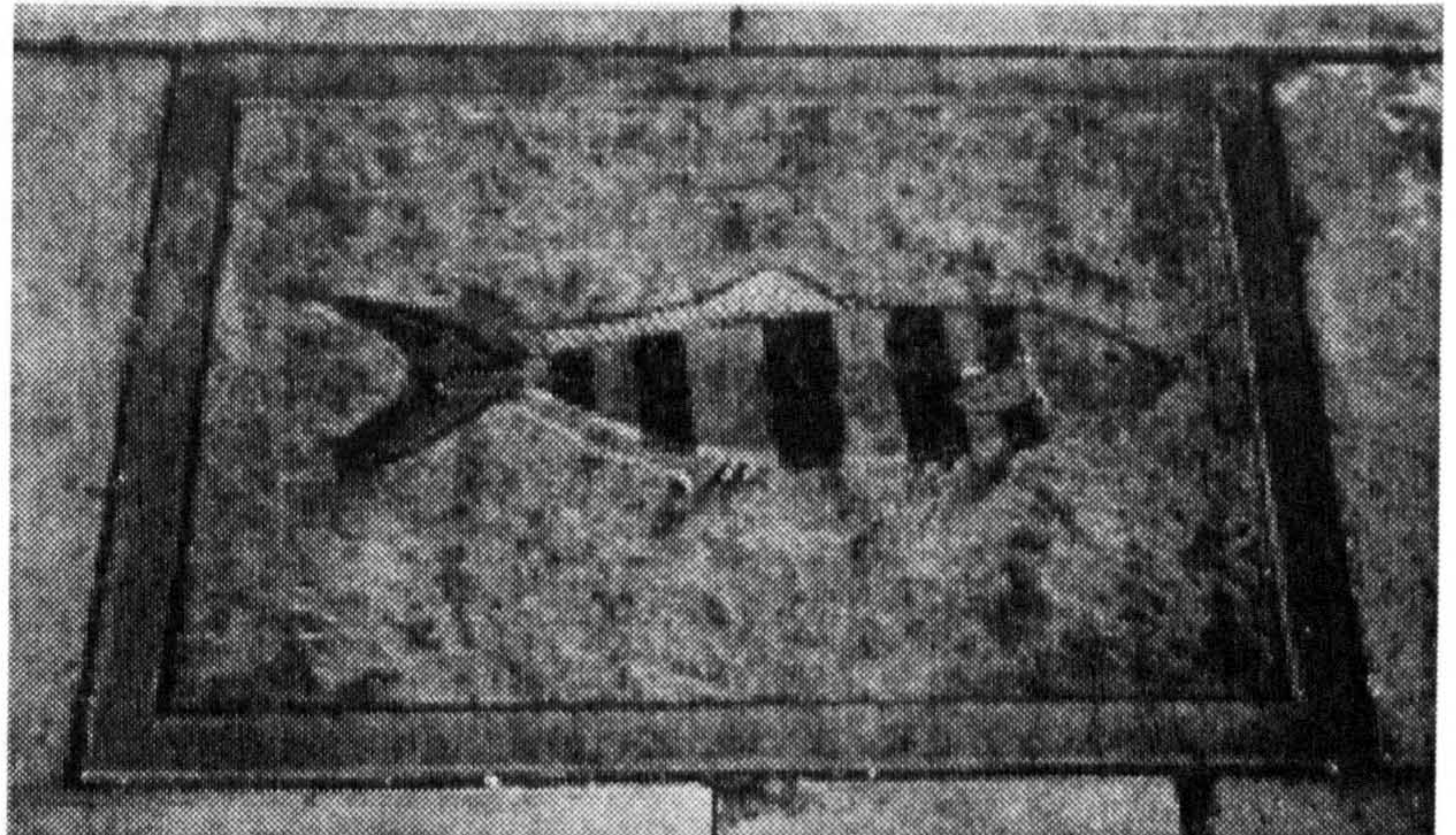
Support for Percent for Art appears to have shifted in the past five years. Vines (1989) suggests that from the artists perspective the allocation of 1% of the building budget to art is the best way to finance a project as it

guarantees that the artist will be paid a fair wage and will increase the status of public art. The author sees it as the way to prevent the artist having to approach and persuade funding bodies to finance projects, particularly those that are for less prestigious establishments.

"Ours is a more literary than visual culture, and visual art has little status. Correspondingly the status of public art is low. The status of public art is bound up with the status of artists. Making art is not considered to be a job, because art is not valued sufficiently and the product is not necessarily tradable. Artists don't choose to be poor- they chose to be artists. Our society chooses not to pay them adequately." (Vines, 1989)

The consensus of opinion now appears to be that there are no incentives to use Percent for Art. It relies too heavily on the motivation of clients and Local Authorities to adopt it and in doing so allocate a large amount of money to something which is still often seen as unnecessary. Miles (1994) in reconsidering a former support for the policy, states that there is a possibility that all this has achieved is an increase in the number of arts administrators based within local government. This may lead to nothing more than another form of curatorship with the

*Seven Seas Fish
Pavement, Hull (Gordon
Young, 1994)*



intention to bring art to a wider audience, the author observes that it is yet to be proven whether public art does lead to urban regeneration, social and economic benefits.

“Art-world values of ambition and status dictate that major public art schemes tend towards parades of the well known carrying out the well rehearsed. This kind of curatorship extends the Victorian values of alms-giving and seeks to create the value free space of the gallery outdoors.” (Miles. 1994)

Drake (1994) states that realistically there is no automatic right to public sector funding and that with increasing numbers of cuts in basic amenities at local government level, this cannot be relied upon as a definite source of funding.

“Percent for Art is a ring fencing mechanism which is based upon an unsound theoretical foundation, precisely because it limits the scope for creative interaction within a particular scheme. It negates other possibilities by the status we, in the public world, give it.

It has been suggested (and shown in reality) that the way forward is to integrate art by having the artist at the centre of the commissioning process rather than at the end of a contract. Curtin (1994), as a practising artist, argues that town planners should involve artists in the design and making of necessary public items such as street furniture, lighting or paving as

opposed to buying them from a catalogue. Alternatively the artworks should be on a human scale as enhancing details rather than being “riddled with pompous civic pride”.

2.6 FORMAL RESEARCH RELATING TO SITE-SPECIFIC ART

Few formal research projects (i.e.. those submitted for higher degrees) involving site-specific art have been completed to date. However an increasing interest in the debates surrounding site-specific art in the last 20 years coupled with a need for its reappraisal has generated the opportunity for formal research undertaken both from a theoretical perspective, and (of particular interest within the context of this project) by practising artists. Critics such as Miles are now reassessing their own previous ideas about Public Art within the framework of a higher degree, whilst artists such as Silver, Hogarth and Ross are currently in the process of researching, respectively, “Context specific art in public”, “Sculpture in the Landscape” and “Public Art in the City of Glasgow”

An M.Phil. project by Power (1988) centred on his practice as a sculptor, and involved the completion and documentation of large-scale sited sculpture including two site-specific public commissions. Although the thesis made an important precedent for this and other practice-led studies of art in architecture that may follow, the author does not go far enough in relating the work to the broader context of art in public and makes few recommendations as a result, either for other practitioners working within the field, or for future collaborative art projects.

Other projects which also have some similarities include an M.Phil. by Greenhill (1984) which examined the relationship between site, material and sculpture. Again this project was practice-led involving the researcher’s use of clay bricks using Northumberland clay to make sculptures and enclosures. On the

face of it this project could be seen as a forerunner for this project as it involved the use of clay as a sculptural material, however this was only used in an unfired state as means to examine philosophical notions of space and location rather than as a material for permanent work. The project was written up as a visual diary documenting the project but again made little reference to the context within which it lay, becoming a highly introspective account of the nature of the artist's practice.

The Ph.D. work of Douglas (1992) also has some parallels, centring on the use of a specific material- concrete- to make sculptural 'tests', and then producing sited sculpture which formed the basis of four case studies. This has similarities with the use of brick in this project, where the researcher has been seeking to use the material as an sculptural medium without having to discuss its properties solely in terms of its material and technical properties.

These projects are important forerunners of this research as they begin to move away from a model for research based on science or social science projects and instead acknowledge the use of artistic procedures as a method for enquiry. They evolved out of the artists' practice and response to materials, and (in the case of Douglas's research) in a way which would more normally be associated with building construction than with sculpture. Both Greenhill and Power's M. Phil. projects also started to address the need for artists to examine the issues surrounding the siting of art in architecture and in the landscape through art practice rather than taking a purely theoretical stance.

2.7 SUMMARY

- Historically there is a precedent for site-specific art and more especially the integration of art in architecture.
- A number of authors suggest that there is a need to identify relevant themes for contemporary site-specific art.
- It has now been recognised that art in public is a valuable part of urban regeneration and the creation of “convivial” spaces.
- There are some new agendas emerging regarding the nature of site-specific art: that it need not be permanent, it should not always refer to the past, there is value in decoration.
- There is a historic precedent for the collaboration between artists and architects; this is seen as the most successful way to integrate art into architecture.
- Much so called Public Artwork is in fact gallery art relocated into public places.
- The opinion of Percent for Art as an appropriate funding mechanism for site-specific artwork has changed; it is now generally thought to be unrealistic for artists to rely on the availability of public money.
- Alternatively artists should be brought in to design integrated items in architecture and cities such as paving and street furniture.

SECTION THREE: METHODOLOGY

3.1 OVERVIEW OF THE METHODOLOGY SECTION

3.1.1 Introduction

The research project centred on the practice of the artist/ researcher as the primary means of obtaining information to support the hypothesis, and involved carrying out commissions for ceramic art works designed for public sites which formed the basis of four 'case studies'.

The first three commissions were completed within the first two years of the research project, and were largely testing-grounds in order to establish an appropriate structure and approach to their analysis. The fourth commission was much larger and more complex, taking over a year to complete, which with the confidence gained in the earlier work is reflected in the Case Study.

The rationale for accumulating information through a 'hands-on' approach was that the outcomes of such a study would be useful to other ceramics practitioners, giving the artist's viewpoint, emerging out of the reflection on the procedures involved in carrying out collaborative public art commissions, rather than attempting to replicate existing historical and theoretical studies about the subject of architectural ceramics and site-specific art.

The analysis of the Case Studies and a 'cross-case comparison' is described in the following section.

3.1.2 Rationale for the choice of methodology

It was found early on in the research programme that established methodologies such as might be used in science and social science projects were not entirely appropriate to an art practice-led project. It must be acknowledged, however, that there were elements of the research in common with these

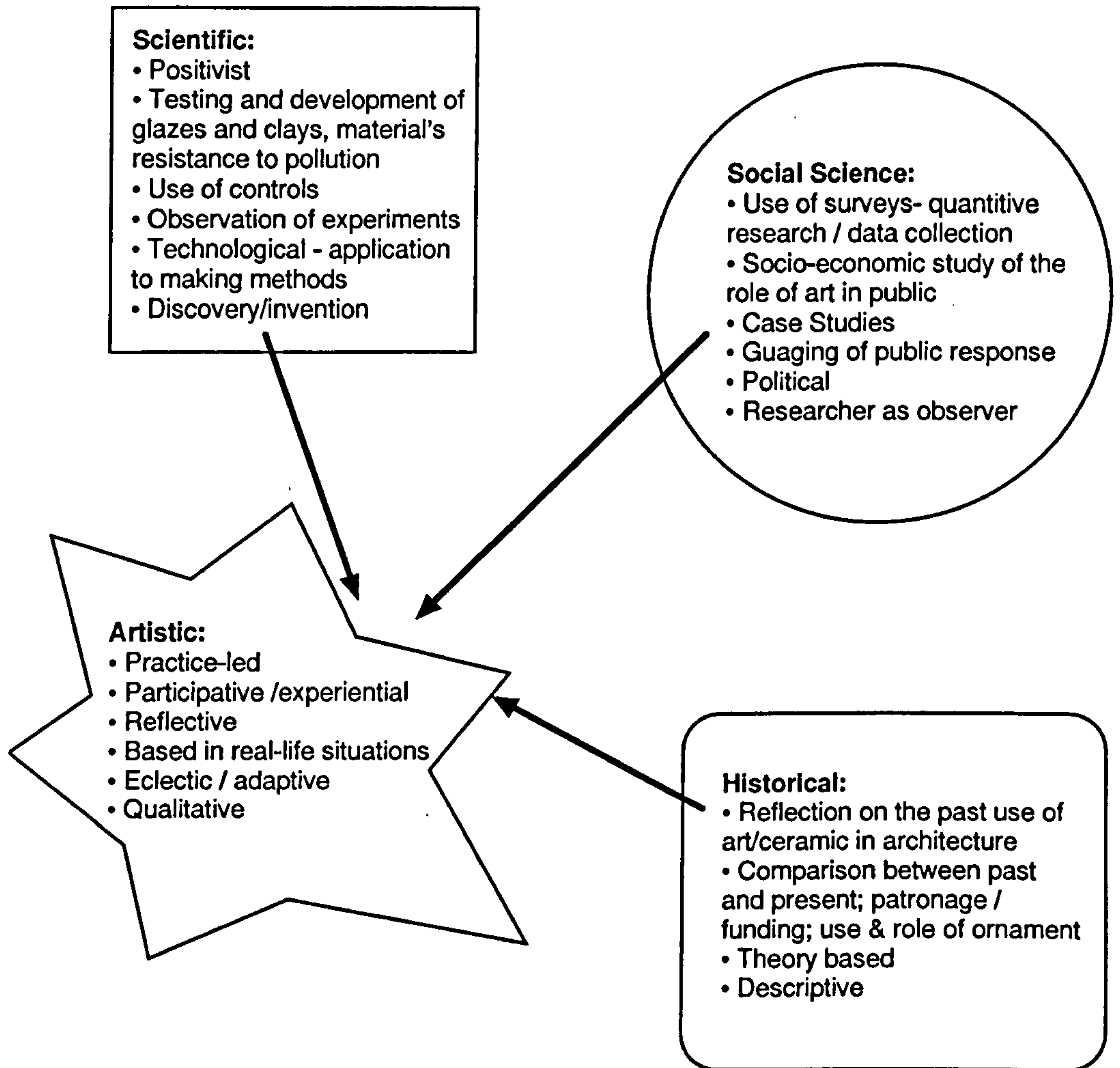
approaches and that during the early stages of the research programme the project could have been made to fit any one of these methodologies. Much emphasis has been placed on the importance of choosing an *appropriate* research 'strategy' in relation to the purpose of the research which may in fact turn out to be a 'multi-method' approach (Robson,1993). It has been observed that this is typical of the eclectic approach taken by artists and designers, assimilating and adapting procedures and information from other fields to suit their own, often unique, way of working (Gray and Pirie,1995).

This is reiterated in relation to art/craft practice, where Press (1995) emphasises the need for appropriate methods of research to be addressed and that the process of 'learning through doing' (undertaken by all makers and which the author refers to as "craft knowledge") to be accepted as a legitimate and valuable mode of research.

"The tools of our research are sometimes mathematics, are sometimes experimental data, but very often they are lines, forms, patterns, textures, colours, spaces and materials. It is these that we manipulate and refine, through the exercise of craft. Part of this craft knowledge is reproducible and amenable to linguistic rationale, but another part is not."

It has been important, therefore, to establish an approach which was appropriate, not only to the nature of the research topic, but also to the specialism of the researcher, as a practising artist rather than a scientist or a historian. (See diag. 3.1) For this reason the research has been carried out through practice and presented as a written and visual documentation (thesis and exhibition), with the sited work as the main outcome.

Diagram 3.1: Alternative approaches to researching architectural ceramics



3.1.3 Case Study as a method of research

The use of case studies, although more usually associated with social science studies, was chosen as the most appropriate means to examine the practice of designing and making artwork within 'live' Public Art projects, as opposed to a theoretical descriptive approach or quasi-scientific enquiry.

Although referring to social science rather than directly to art and design research, this type of study, involving people in 'real' situations, has been described as being one of "naturalistic enquiry" (Robson,1993) for which case studies are both a legitimate and appropriate mode of research. The flexibility of this approach, permitting the combining of appropriate methods for gathering evidence within a 'live' context, marks a distinct shift from the opinion that to be research the study must be grounded in a 'positivist' approach based on a set hypothesis tested by survey or experiment, neither of which was appropriate to this project.

Robson (after Lincoln and Guba, 1985) goes on to list the characteristics of 'naturalistic enquiry' many of which are applicable to art and design practice-based research (Diagram 3.2). Most interesting is the author's acknowledgement that tacit, or intuitive, knowledge is legitimate in addition to other types of knowledge and that the design of the research emerges from the particular researcher's interaction with the study rather than being strictly set out from the start. This frequently occurs in art-practice where an idea evolves or a material is manipulated intuitively without necessarily being planned or premeditated, but this action can have a significant bearing on the direction taken and consequently on the result obtained. This process of "learning through doing" has been described as "reflecting-in-action" (Schön,1991) and supports the notion that the practitioner does not work within a set of prescribed circumstances.

The process of architectural design and research has been described as a constant cyclical shift of emphasis as plans are reappraised in the light of new ideas and opinions before a final artistic conclusion is reached (Zeisel, 1981). This approach

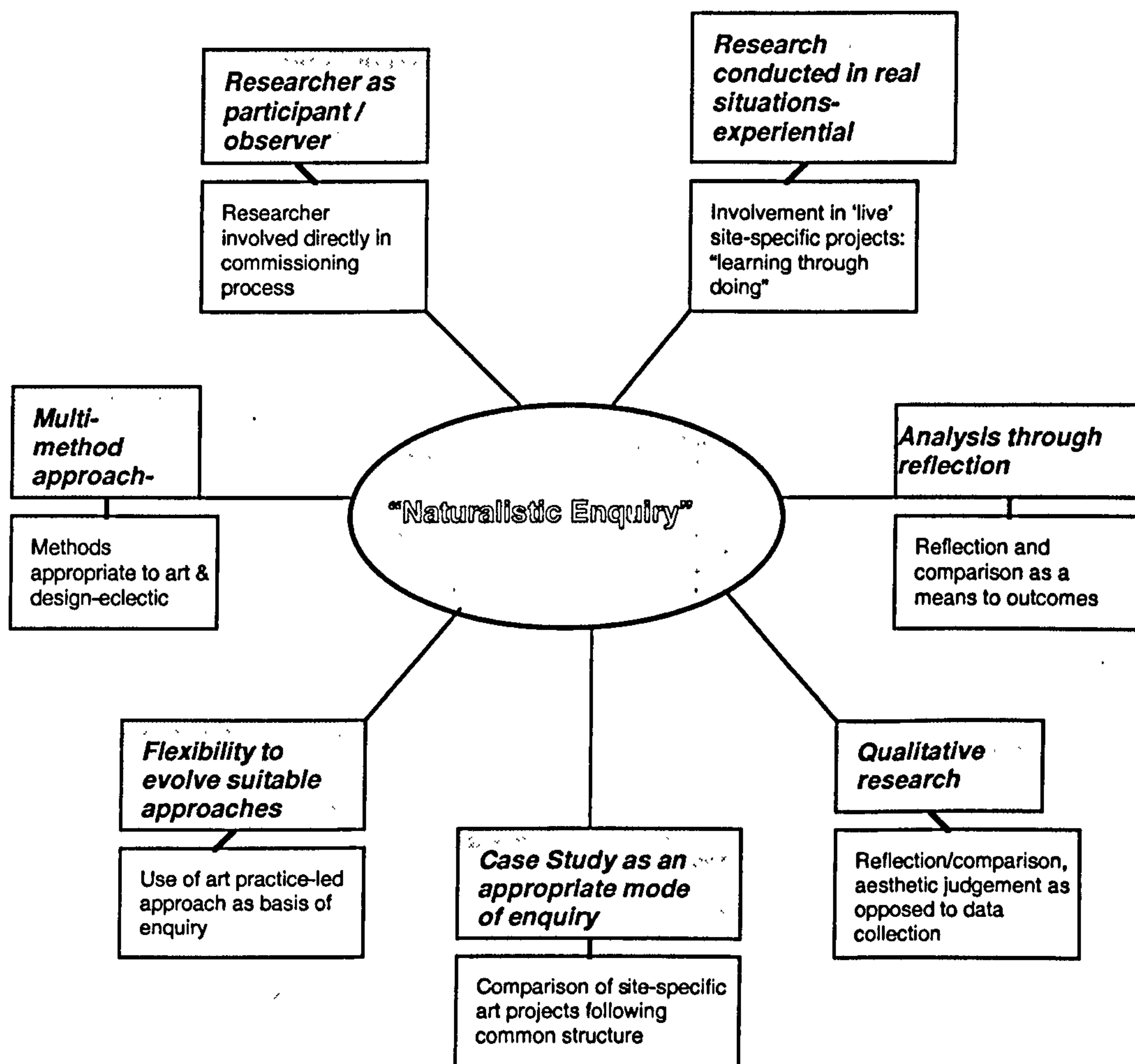


Diagram 3.2: Naturalistic Enquiry with relation to the research project (adapted from Robson, 1993)

mirrors that of the artist / researcher' practice, and serves to reinforce the reasons for adopting case study as the method of enquiry in this project.

3.1.4 The structure of the case studies

The whole process of designing, making and installing site-specific artwork involves research at each stage if it is to be successfully completed.

In the course of the research, four commissions to produce large ceramic works for architecture were completed forming the basis of the Case Studies. The structure of these Case Studies evolved through reflection on the practice as a means to compare the projects and elicit information on the commissioning process, roles of the participants, and the artist/ researcher's design process.

The layout of each of the accounts of the four Case Studies follows the same pattern, the only variation occurring where there were different participants. The structure was broken down into sections corresponding to the main stages in the commissioning process:-

- **Background section:** This sets out the objectives of the commission, the nature of the collaboration and the parameters within which the artist worked. The section includes the Artist's Brief and the site requirements (technical, safety, legal), Funding and contracts.
- **The participants involved in the commission:** This describes the roles of people directly involved with the commission and may vary from each case study (client, artist, architect, arts officer)
- **The artist's response to the brief:** This describes the process the process of design and development in response to the requirements of the clients and site.

- **Documentation of the commissions:** The commissions were documented in diary format describing the development and making of the work and highlighting key points within the commissioning process. These have been placed in Appendix 1 for reference. The information from these formed the basis of this section.
- **Summary of the main points in the commissions:** themes, materials, site, participants.

3.1.5 Production of work outside the case studies

Work has been made throughout the research programme alongside the commissioned pieces giving the opportunity to experiment with making methods, glazes and development of imagery which was not applicable in the case studies. This work was important as a way of maintaining quality and freshness in the commissioned work through the development of the art practice and in building a resource for ideas and techniques for future commissioned work. In addition, questions arising as to how the design of public and private artwork might differ or contribute to one another could be examined.

3.1.6 Summary

- The research project was practice-led involving the design and making of site-specific ceramic features for public buildings, these formed the basis of four case studies.
- The research has been carried out using a multi-method approach which draws on aspects of established science, social science and historical approaches whilst seeking to formulate an appropriate 'artistic' method.
- The Case Studies involved visual and written documentation and have been analysed through reflection on the practice and comparison of the case studies.

Diagram 3.3 illustrates the approach taken in the project as a whole

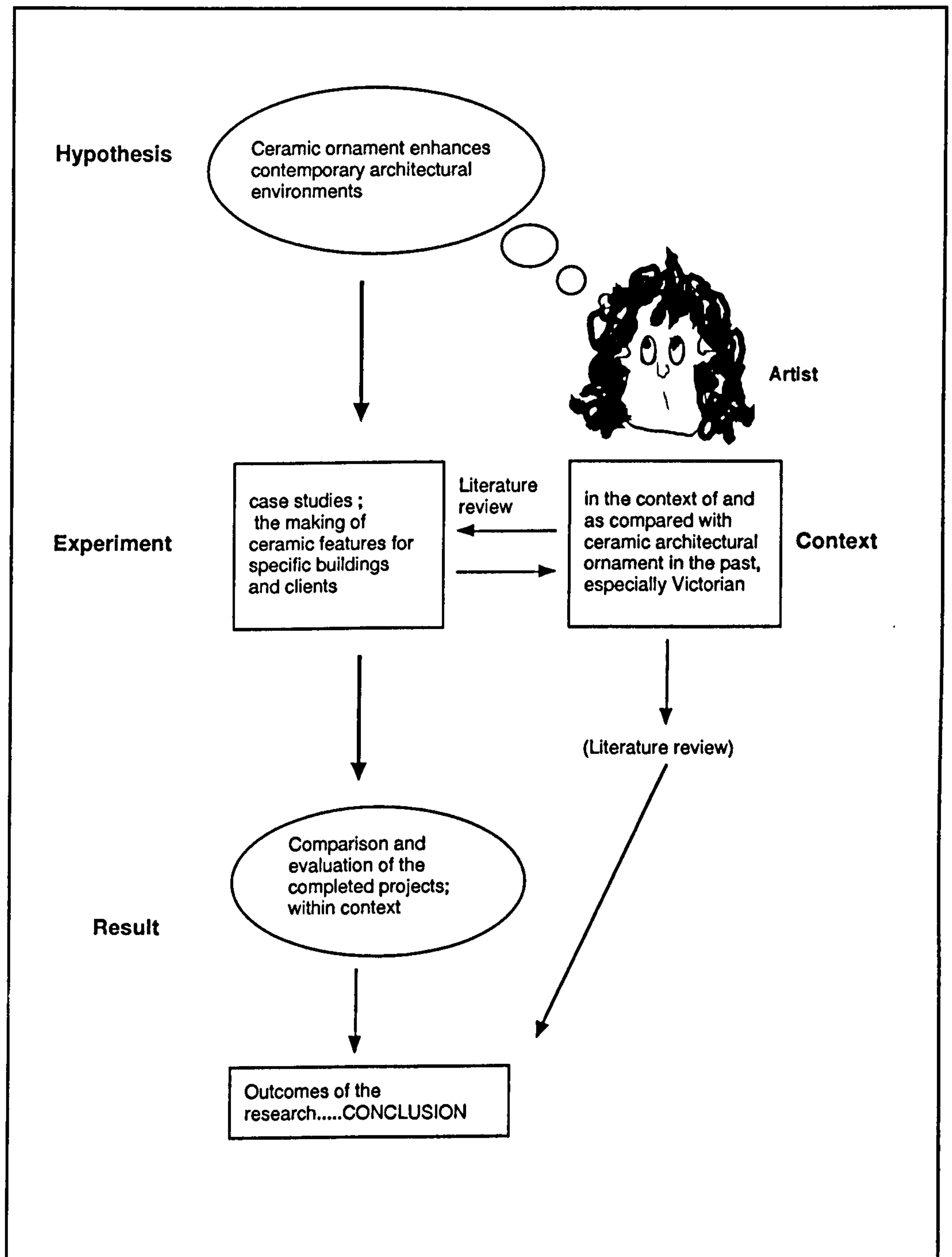


Diagram 3.3: Approach to the research project

3.2 CASE STUDY ONE: “TREE OF LIFE”

3.2.1 BACKGROUND SECTION

3.2.1.1 Introduction

This case study describes the design and making of a ceramic sculpture sited in a new medical centre located in a former mining area in South Tyneside. The proposed site within the medical centre was a centrally located atrium leading to the consulting rooms which, although not a main reception or waiting area, was a focal point and an otherwise empty space.

The commission involved the collaboration of a number of parties involved at different stages with influences on and interests in different aspects of the project as it progressed from the commissioning of the work and the development of the imagery to the making of the work and its final installation on site. These individuals and their respective relationships and roles in the commission are illustrated in diagram 3.2.1 and are documented in detail in the following sections.

The following account outlines the process of commissioning the site specific artwork, the design and making methods used leading to the installation of the completed sculpture.

3.2.1.2 Background to the commission

The commission originated early in 1991 when a group of doctors contacted the Visual Arts Officer of the Regional Arts Association expressing an interest in commissioning a sculptural feature that could contain plants for an atrium in a new surgery. The client wished to use Percent for art as the means of identifying and keeping a budget specifically for artwork but as

there was no Percent for Art policy in place in the Regional arts association, therefore the project was passed over to another local authority.

An initial proposal for an indoor greenhouse or terrarium by the architects, was rejected by the clients as it was felt to be inappropriate for the site, on the grounds that a large glass structure could be hazardous in a public thoroughfare and also it would steam up with the heat of the building obscuring the plants inside.

A meeting was arranged between a representative of the client group and the Percent for Arts officer at an exhibition of sculpture sited at Kirkley Hall, Northumberland, which was an opportunity to see at first hand work by a number of local artists. Three artists were short listed on the basis of the work on show and the Arts Officer was invited for a second meeting to give a presentation of the selected artists' work to the client group, resulting in the commission being offered to this researcher.

3.2.1.3 Site requirements

The proposed site for a planted feature was established at the design stage of the building and before the appointment of the artist. At the first site visit the concrete foundations had been laid which indicated the layout and sizes of the rooms, including the atrium where the sculpture would be sited. This gave little indication however as to the type of work that might be suitable.

The overall shape and proportions of the site suggested a sculpture which would take up a relatively small area at the base, which would extend upwards to a maximum height of five metres. There was a skylight in a pitched roof giving natural light from above which ensured any fine detail at the top of the piece would be visible. The interior was also to be lit by fluorescent lighting on three sides of the space. The architect had specified that the interior decoration should be in neutral tones using natural wood and cork floor tiles which would make the atrium as light as possible and would not visually dominate the proposed sculpture.

Specified requirements regarding the site and the proposed sculpture were primarily linked to Health and Safety or to those of access:-

- The sculpture should not present a fire risk or obstruct fire exits - (fire regulations required a minimum 1200mm wide passageways around the feature)
- The base area of the sculpture should not exceed 2m X 2m and the height should not exceed 5m with no danger of fragile parts breaking off or being easily damaged.
- The sculpture should not contain flammable materials and should be virtually maintenance free.
- Corners of the base should not be sharp or protrude into access ways and cause injury.
- The passageways surrounding the sculpture should allow for wheelchair access.
- The planted area should have adequate drainage facilities.

From these requirements and through discussions with the clients regarding the nature of the design of a sculpture and the imagery, the artists brief was established and agreed with the Arts Officer. This, along with an estimated time scale and break down of costs, had also to be agreed by the project architect before the project could proceed further. The artist's brief was not designed as a formal contract but was verbally agreed and minuted by the Arts Officer, with details exchanged between artist and architect.

3.2.1.4 The Artist's brief

The brief required the artist to design, make and install a ceramic feature that incorporated planting containers as part of its structure and composition for the atrium of a new medical centre. The artwork was to be site specific in terms of its appropriateness to the site, and the users and staff of the medical centre.

The imagery was to reflect the medical profession and healing through images and symbols and be predominately ornamental in character rather than seeking to illustrate specific activities relating to medicine or the users of the medical centre. Other themes considered were those relating to the history of the town, with its links with the mining industry or geographical references to the area.

As part of the design considerations, the safety and suitability of the material and the construction of the artwork to a public place was to be taken into account.

3.2.1.5 Funding and contracts

The project was funded by the allocation of a proportion of the total building cost to an artwork through the “Percent for Art scheme” (ref. section 1.5), and was managed by a ‘Percent for Art’ officer working for the local authority and funded by the Arts Council and the Regional Arts Association. The budget was reallocated as the fixed fee at the start of the commission before the artist was chosen and represented approximately one percent of the total building cost. It was not clear whether the architect had been aware of the ‘Percent for Art’ scheme and had negotiated for one percent of the budget, or that the figure was coincidentally the estimated cost of the proposed terrarium. This sum was agreed by the client and was intended to be kept separate from the main budget.

3.2.2 THE ROLES OF THE PARTICIPANTS

3.2.2.1 The Client

The ‘client’ was a partnership of four doctors who were jointly responsible for establishing the new medical centre. The partners decided jointly to commission a piece of artwork or ornamental feature for the new surgery, with one representative being responsible for initiating the commissioning process and to oversee the project as it progressed.

The clients played a key role by having the interest and the initiative to commission a site-specific artwork when the architect’s proposal for a terrarium was deemed unsuitable, and also to include a ‘Percent for Arts’ Officer to be the intermediary between client and artist (and other parties).

After choosing an artist whose work they felt would be appropriate for the commission, the clients arranged with the Percent for Arts Officer to hold a third meeting at their old surgery to discuss ideas for the piece with the artist. The aim of this meeting was to discuss the clients' ideas regarding the nature of the imagery, themes and character of the work they envisaged for the new surgery, and to establish any specific technical details.

The doctor who had initiated the decision to commission the artwork agreed to keep in contact with the artist to monitor the progress of design and making of the work, to make suggestions and to relay information back to the other clients. He took a keen interest in the making process and development of ideas, making regular visits to the studio and arranging meetings between artist, architect, arts officer and builders throughout the duration of the contract.

3.2.2.2 The artist

The clients had a fairly clear idea of the type of themes they wished to be expressed in the sculpture but very little knowledge as to how these could be realised in terms of a ceramic form. In this project the role of the artist was that of an expert with a specialised knowledge of a particular material, clay, and using this to interpret these themes and realise them three dimensionally.

It became apparent that it was necessary to be conversant in a number of areas including technical drawing, bricklaying, safety regulations and contracts as well as being an artist and designer specialising in ceramics. Throughout the design and making

process information on safe and appropriate methods and materials had to be researched along with the development of suitable imagery.

With relation to the building contract, the artist's role was defined as specialist subcontractor to the main contracting company which meant that (on paper) the artist was seen as no different from any other contractor such as an electrician or painter and as such was under obligation to work within the main contractors schedule fitting in with the other building works; flooring, glazing etc.

3.2.2.3 The architect

The architects' practice was located at some distance from the site specialised in building designs for the medical profession- (surgeries, medical centres etc.). The architects had little contact with the project other than to approve or amend drawings and plans of the proposed piece and to outline specifications for weight loading on the floor and drainage system for the part of the piece that was to contain plants. Apart from two meetings, one at the start and one at the end of the commission, the only communication between artist and architect was if there were any technical problems.

The architects arranged that the artist would be accountable to the main contractors with the architects holding a supervisory role, ensuring deadlines were met by the artist and contractors and to liaise with the arts officer in specifying materials and details regarding payment and contractual obligations.

3.2.2.4 The Public Arts Officer

This commission was unusual in that the Public Arts Officer was working outside of the established region. The role of the arts officer in any commission is to act as an interface between the client and the artist. In this project, the clients were referred to the arts officer for assistance in choosing an appropriate artist and to manage the contractual details of the commission thereafter.

At the start of the commission the Arts Officer gave a slide presentation of the work of the short listed artists and advised the clients on what could be achieved within the limitations of the budget and available time scale. In the early stages of the commission the Arts Officer remained closely involved overseeing the formal and contractual aspects of the commissioning process, including arranging meetings between the artist and the clients, architects and contractors.

As the commission progressed this input decreased steadily until the design and making of the sculpture was well under way at which point direct contact was maintained between client and artist on a more informal basis.

3.2.3 RESPONSE TO THE ARTIST'S BRIEF

3.2.3.1 Sources of imagery

Through discussion with the staff of the medical centre, it was decided that the dominant theme in the work should relate to medicine and the healing arts. The doctors along with representatives of the nursing and support staff had an idea of the type of imagery that the sculpture should include- that it should reflect the location of the new surgery, its links with the past and the people who would be using the surgery along with the medical profession. There was some conflict of opinions as to whether these ideas should be conveyed through recognisable images or in a symbolic way. There was a consensus that the work should be made of ceramic and that plants should be included in the design.

Initial research into imagery associated with this subject revealed a wealth of possible solutions, many of which dated from ancient philosophies, mythology and superstition on life and health around which a symbolic language had evolved. The sources of imagery were diverse: books on alchemical symbols showing the elements, botanical drawings and engravings, sculpture and motifs based on trees, architectural drawings and garden architecture.

Several main themes emerged: (Diagram 3.4)

- The tree of life- symbolising growth, healing and renewal, and a link between earth and the heavens and the cycle of birth, life, death and regeneration.

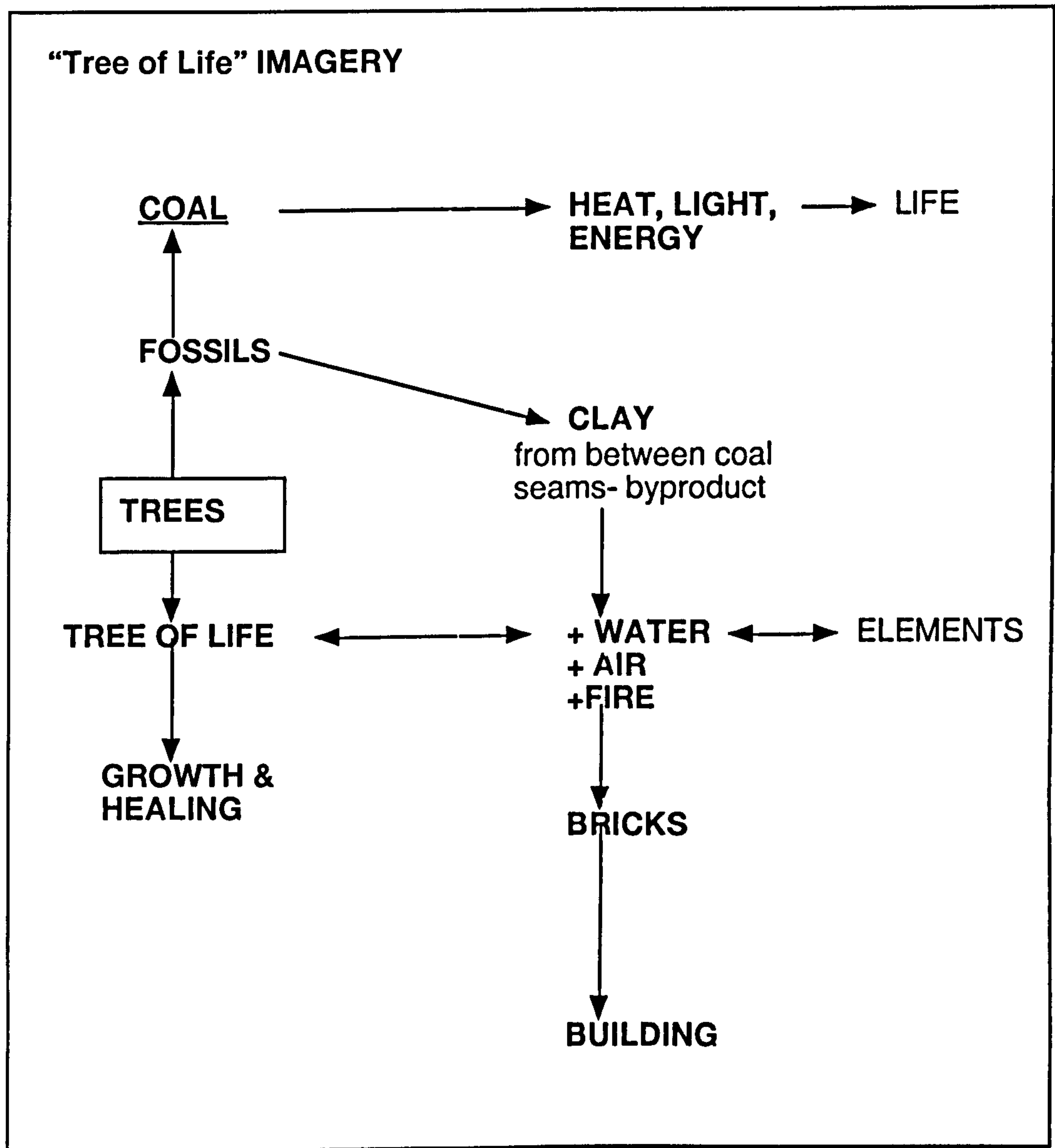
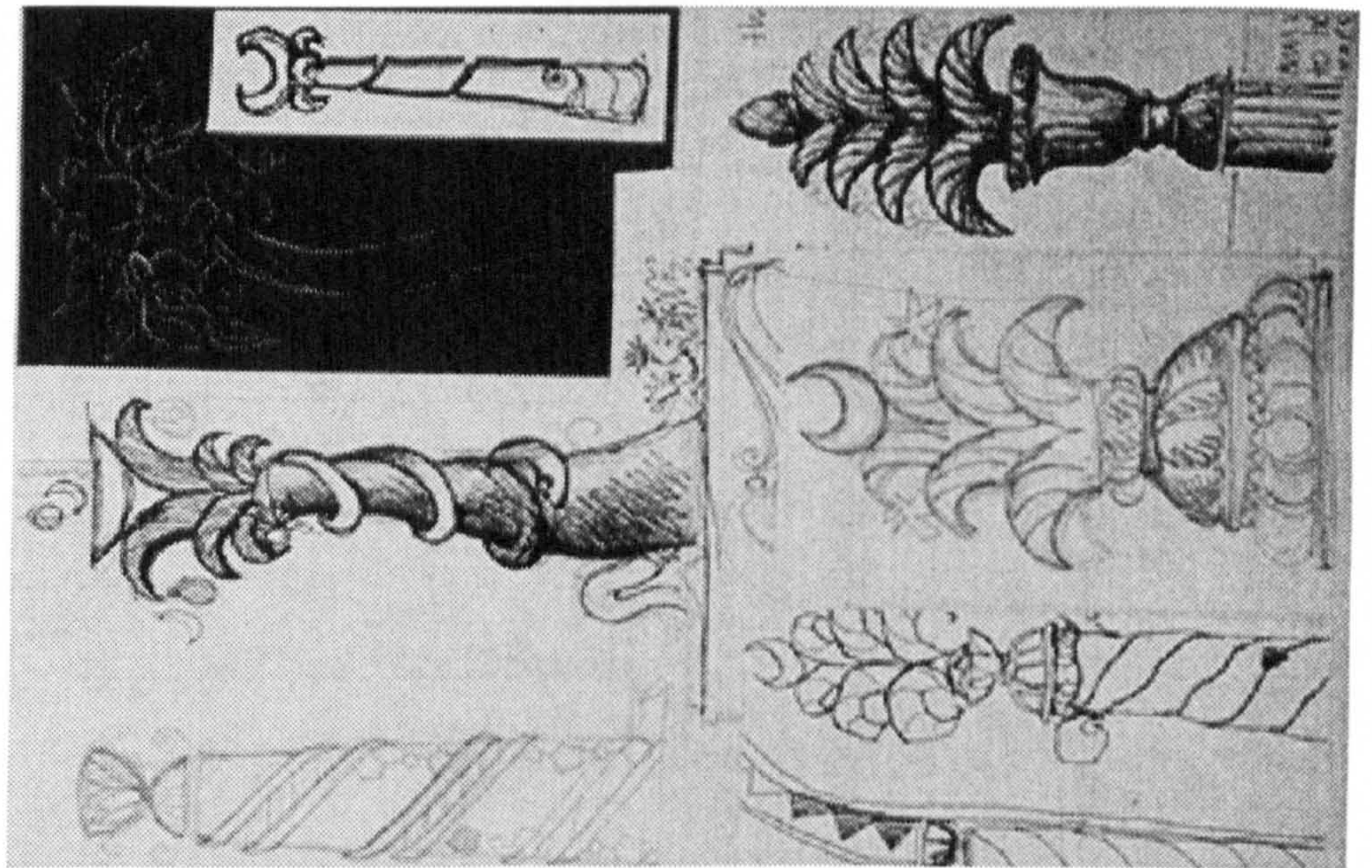
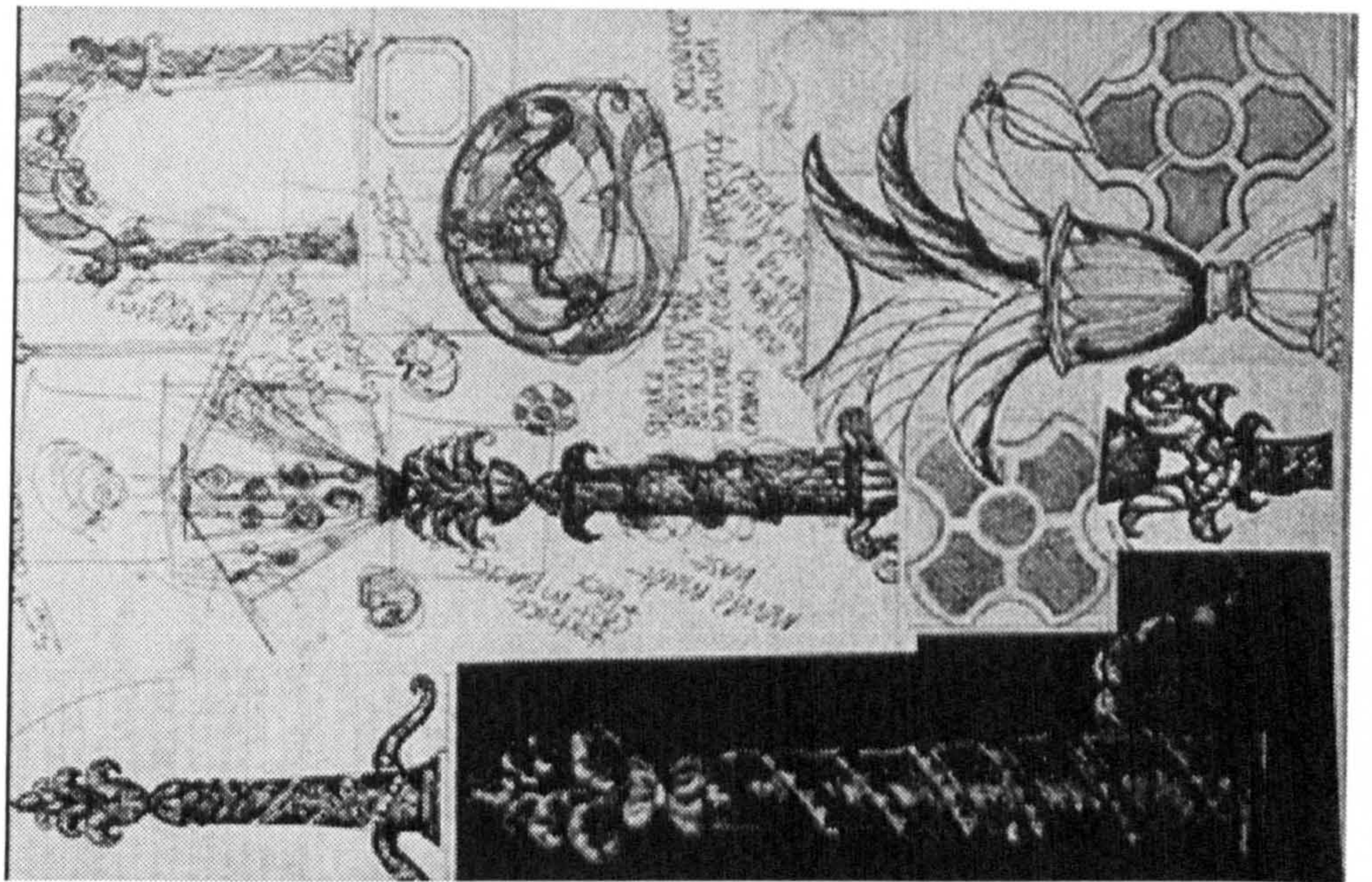


Diagram 3.4: Case Study 1: Development of imagery

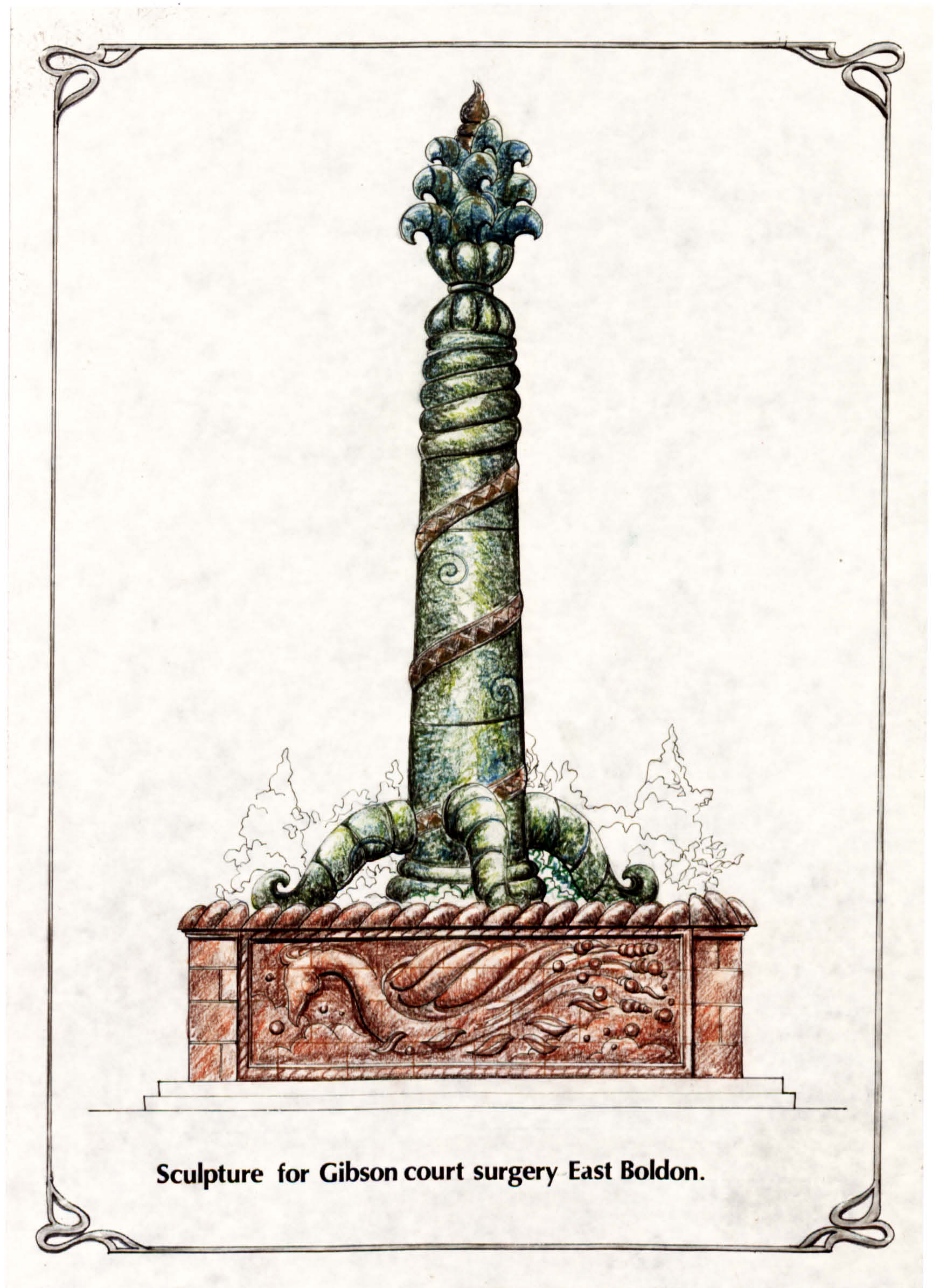
- Animals associated with the Tree of Life- Different animals were mythological linked with different elements of the tree.- Dragons and snakes with the roots as primal forces; lions, unicorns and other animals expressing elevation and aggression were associated with the trunk and birds with the foliage.
- The snake coiling around a staff or tree trunk, traditionally the symbol of medicine and healing and still used today. The snake was associated with wisdom.
- 'Alternative' medical practices and herbal remedies- It seemed appropriate that herbs and plants traditionally used in medicine should be used in the planting of the piece.
- The elements, earth, air, fire and water are not only associated with the ideas of life, renewal and regeneration but also coincidentally relate to the cycle involved in the production of coal and clay, originating as fossilised trees which produced energy, which historically was region's key industry.

3.2.3.2 Development leading to the proposal

In consultation with the clients, the theme of the Tree of Life was chosen to be the basis of the sculpture, with the four elements incorporated as part of the design. The notion of cycles of regeneration which related to medicine and the elements gave rise to the idea of using bricks and brick clay in the making of the sculpture. Brick clay in the area was obtained from between coal seams formed, like coal, by the breakdown of trees over millions of years and produced as a by product of the coal industry who owned the brick works and fuelled the kilns.



Drawings leading to proposal



Sculpture for Gibson court surgery East Boldon.

Finalised proposal for the 'Tree of Life'

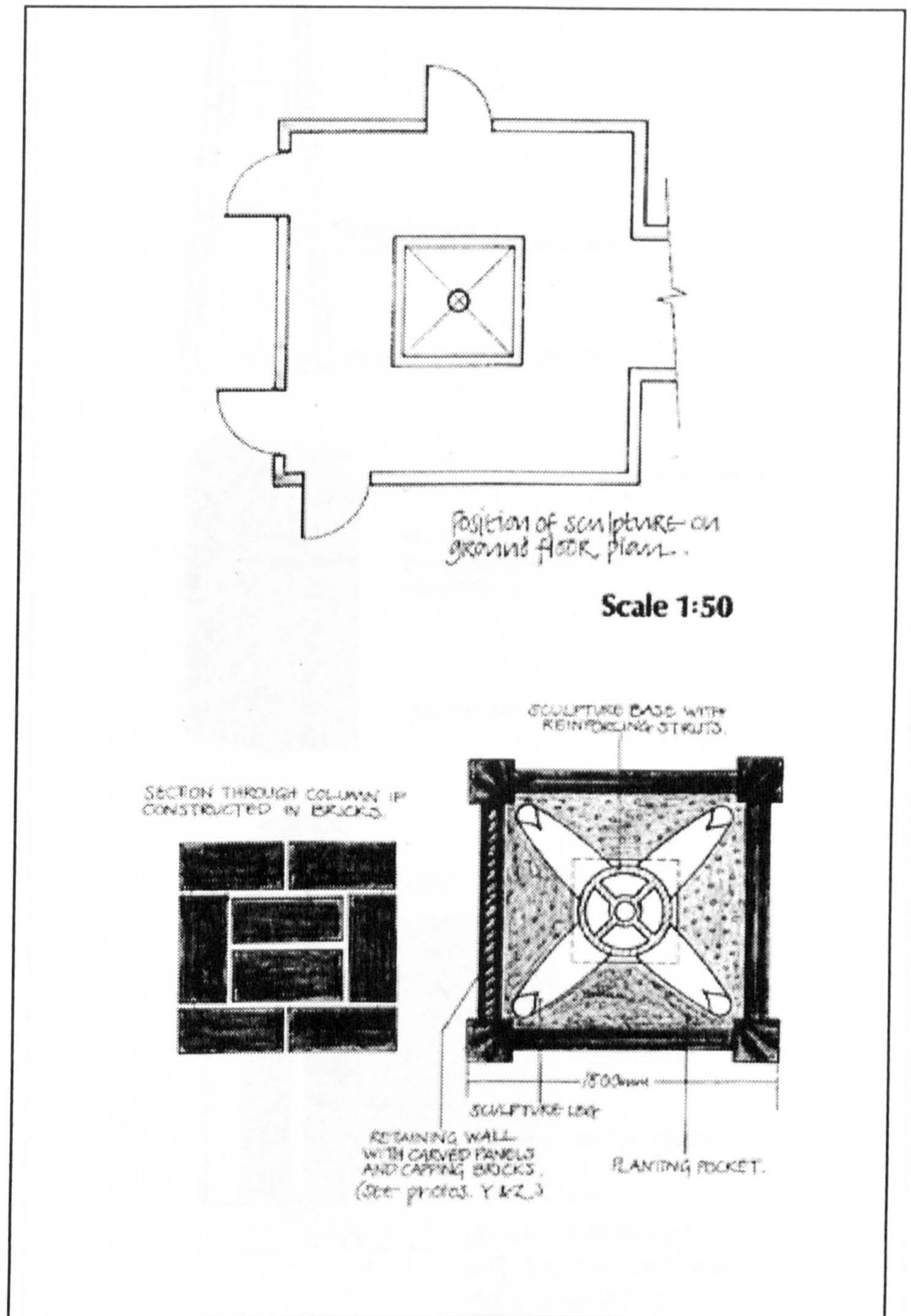
3.2.3.3 The development of designs

The designs were required to be submitted for approval and involved two different styles of presentation. For the clients, a visual representation of how the piece might look on completion and including references to the sources of imagery whilst the architect required precise design specifications showing the position of the sculpture, scale, materials, construction and drainage facilities along with a breakdown of costs.

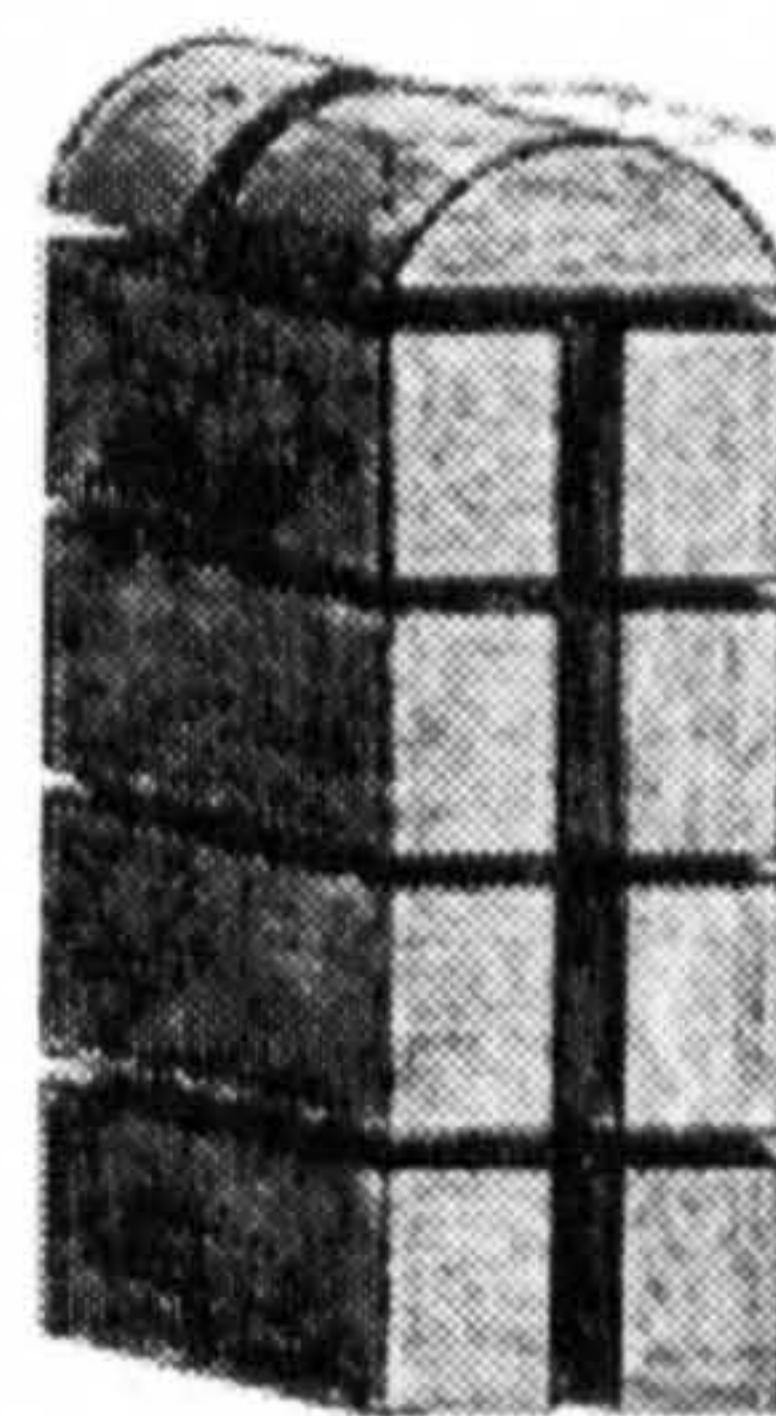
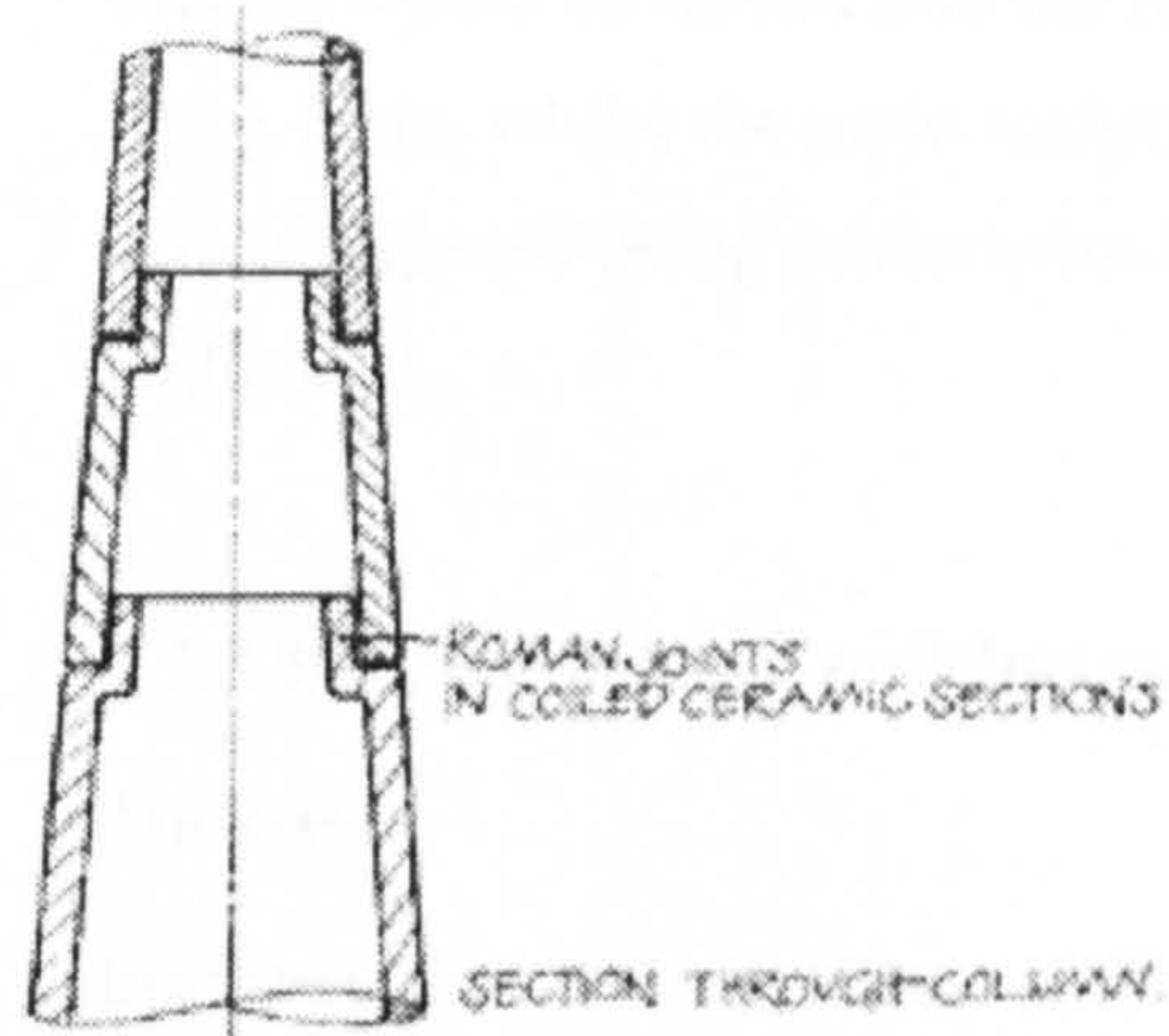
The clients approved the proposal with small modifications (such as that the snake should not be included as it was feared that it might be disturbing to some patients). An early suggestion that the piece might be a water feature was also rejected in preference to the idea of incorporating medicinal herbs in designs based on Elizabethan knot gardens. The architects required modifications to the plans to make them more easily interpreted both by themselves and the contractors before approving the designs.

3.2.3.4 The artist's proposal

Having established the materials that were to be used, designs were drawn up based around the themes of tree forms. The proposal was for a square brick container for plants incorporating images relating to the elements carved in each side at a height and depth of relief that would be tactile and easily seen. A central pillar would represent the tree with a snake form coiled around it. The plants would be herbs associated with healing properties which would be arranged in patterns similar to a knot garden.

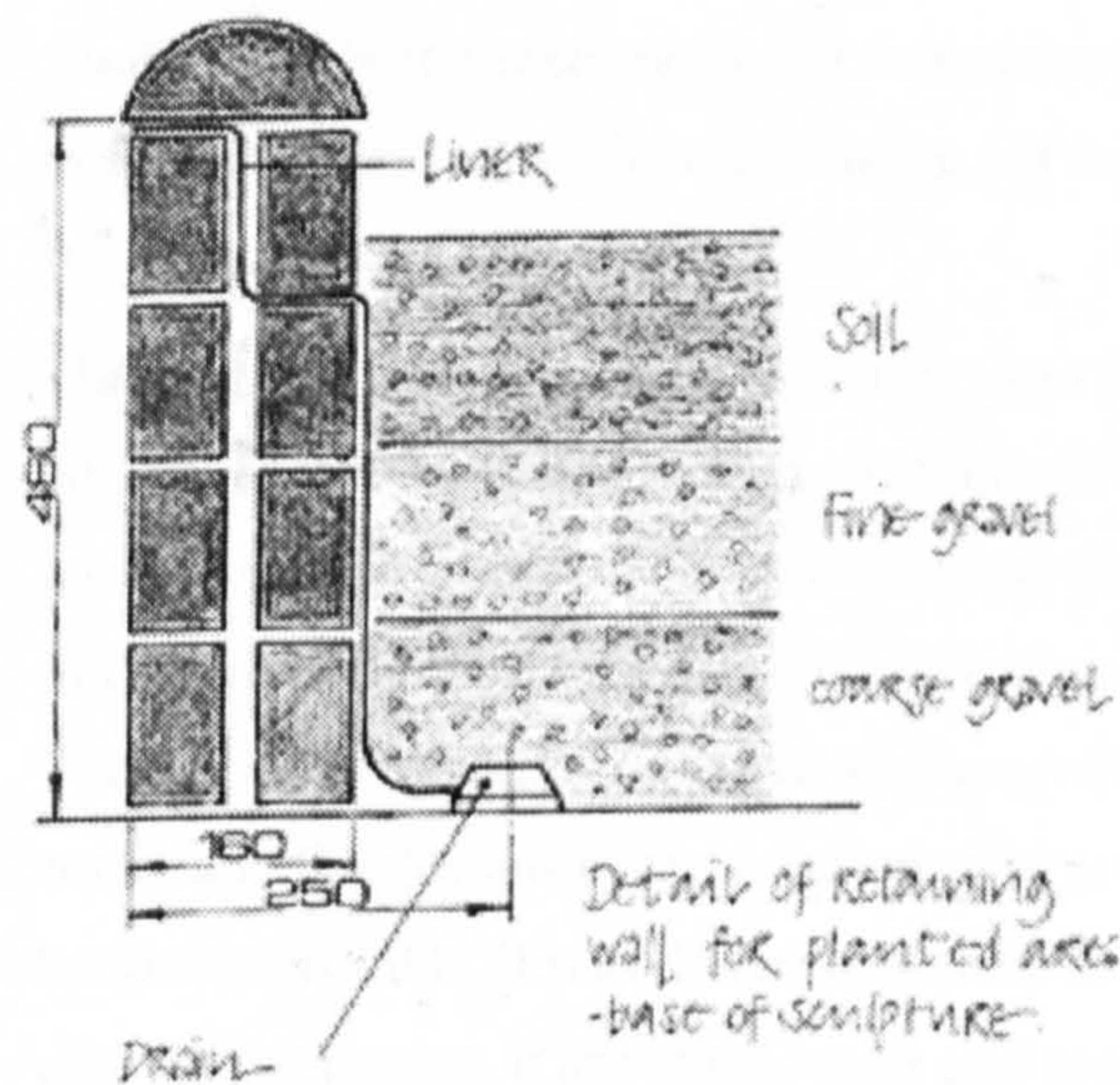


Plan of proposed structure of the sculpture (not to scale)



CAPPING BRICKS CARVED FROM STANDARD BRICKS

BRICKS LAID ON THEIR SIDES
TO INCREASE SURFACE AREA
(SEE PHOTO X.)



Scale 1:5

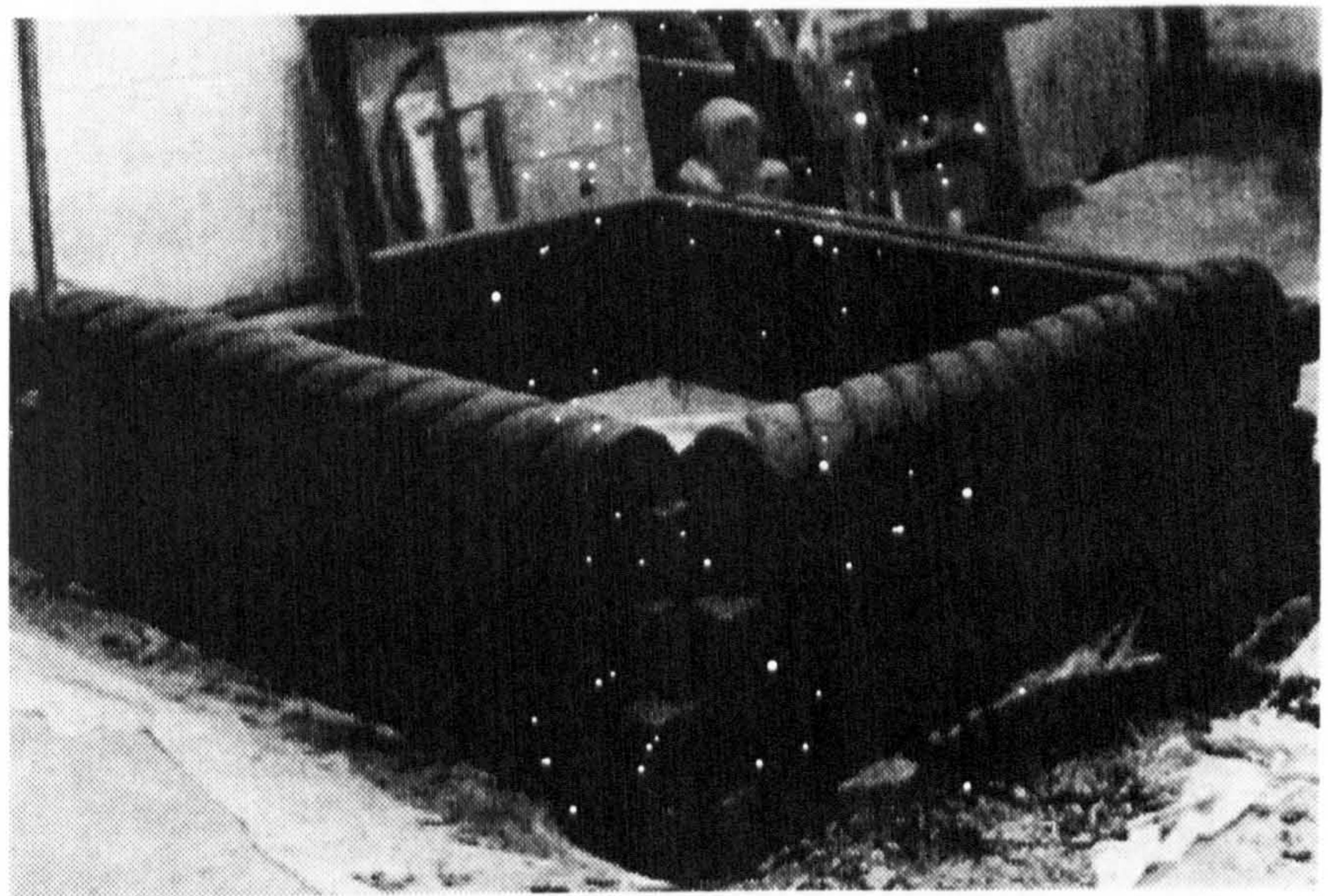
Images would be carved into the brick containing walls before firing them, whilst the main sculpture would be built from ceramic, glazed using colours similar to those of natural stone and plants.

3.2.3.5 Materials and making methods (see Appendix B)

The base

Brick was chosen for the base of the sculpture as it combined both the required functional aspect and could be carved to incorporate decoration. The necessary standard solid bricks were obtained as material sponsorship from a local brick company in their unfired “green” state. These were then built up into walls corresponding to the design of the artwork in the artist/researcher’s studio, taking into account the shrinkage of the brick in firing (approx. 10%). The bricks were built up on edge rather than conventionally to give as large an area uninterrupted by mortar joints as possible. The walls were built double skin both for strength and waterproofing and drainage with bricks laid across the top forming coping and pillars built up at the corners.

The designs (earth, air, fire and water) were scored into the surface of each wall in turn using a standard boxwood pottery tool before covering with damp cloths and polythene to prevent drying until ready to carve. The ideal carving texture was “leather hard”: if the bricks were too damp the clay became sticky and the designs became indistinct, if it was too dry they tended to crumble. It was discovered early on that, as the brick clay was so porous, it absorbed water and also dried very quickly, but as it was winter there was not too much problem in maintaining the correct water content and consistency.



Carving the bricks



Details of the carved walls

The brick panels and coping bricks were then carved out roughly to establish the different levels of relief and detail with “negative” areas of the pattern removed. The carving was finally finished and refined using fine metal modelling tools. Each panel took 3-4 days carving.

Drying and firing

The bricks were allowed to partially dry before being disassembled, numbered and colour coded and placed on wooden palettes to dry completely. There was a danger of frost damage and so the bricks were moved into a warmer workshop. Once the bricks’ surfaces were completely dry (approx. 10 days) they were stacked in a kiln to be dried at 100°C for a further 3 days. They were then fired to 1060°C over 2 days and unloaded after 2 days cooling.

The ‘Tree’- making

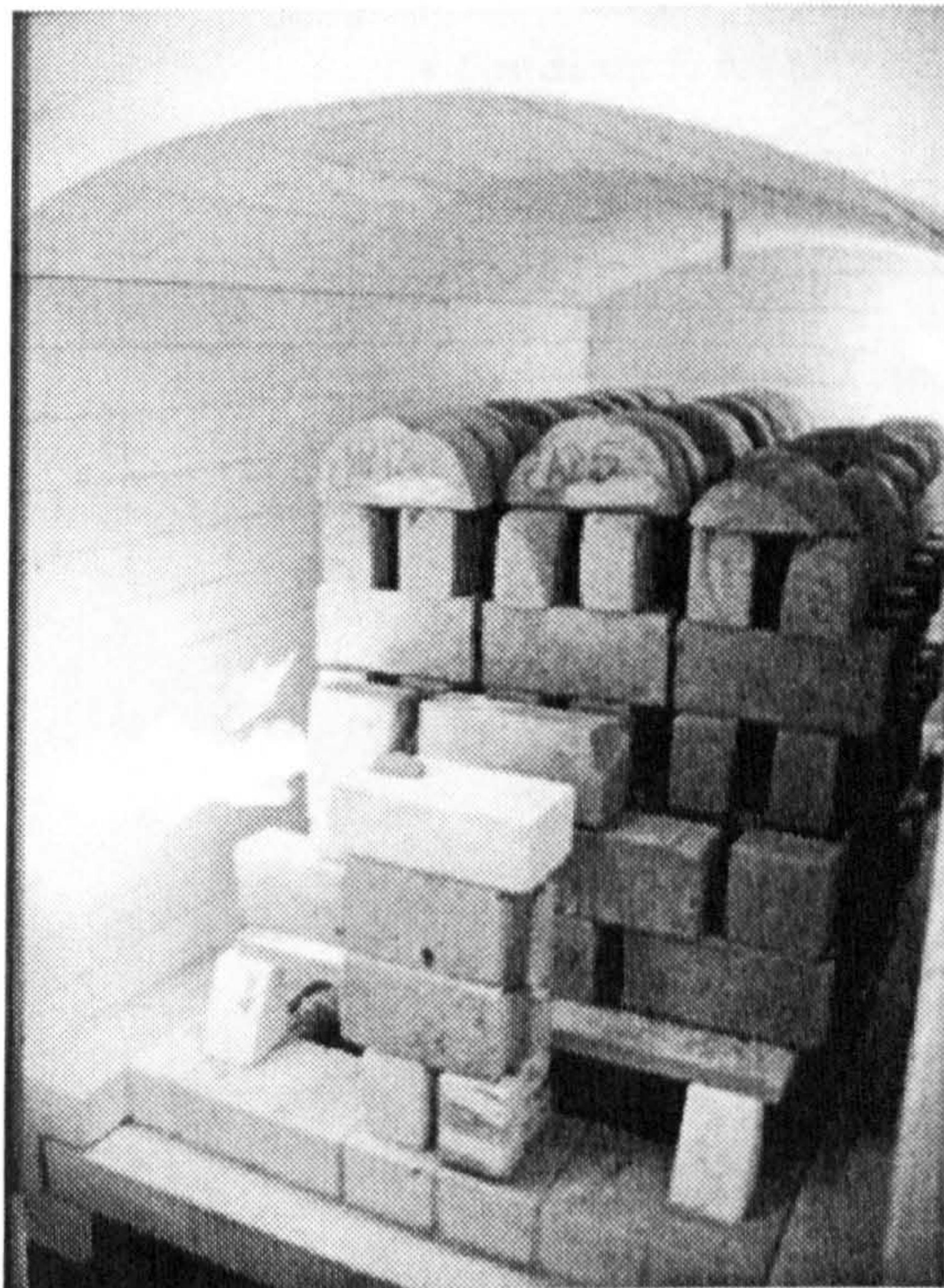


The main tree section was hand built from Raku Stoneware clay using large coils of clay extruded using a pugmill. These were built into a hollow tapering pillar forming the main ‘trunk’ and incorporating Roman joints at intervals to divide the pillar into four manageable sections. The pillar was given texture using plaster relief stamps, leaves, pinecones and clay smeared onto the surface to create a bark-like appearance.

The 'capital' and roots were made in much the same way, using a combination of coil and slab building techniques and again incorporating joints to fit them to the main trunk.

Drying and firing

The piece was sprayed with porcelain casting slip before dismantling it for drying. After drying for approximately 2 weeks the tree piece was transferred to the kiln and dried for a further 4 days building the temperature up slowly to 250°C



Firing of the bricks

before biscuit firing to 1000°C in 3 days (to cool). The piece was unloaded and reassembled to check for any damage or warping during firing and to ensure that the glaze would be applied evenly.

A mixture of iron and manganese oxides were applied as a wash over the surface of the fired form to highlight the relief texture and allowed to dry before a dry stoneware glaze was sprayed all over. The piece was finally fired to 1260°C (oxidation) taking 4 days from loading to cool.

Installation

The piece was scheduled to be installed by the building contractors towards the end of the building programme to prevent damage. The brick walls were installed first by a brick layer on site using a standard mortar with raked joints which were later filled with a coloured mortar.

A concrete base for the tree was built in the centre of the walls which were waterproofed using bitumen with the surrounding space for planting filled with gravel. The tree was subsequently built up using cement joints for the main 'trunk' and top with resin used to attach the 'roots'.

3.2.4 Summary

- **Site:** Atrium in a new medical centre
- **Funding:** % for art
- **Participants:** Clients (4 doctors), artist, architect, % for Art Officer
- **Artist's response:** Freestanding decorative planted sculpture
- **Imagery:** Relating to medicine, life, health etc. (site-specific)
- **Materials:** Carved brick, hand built & glazed stoneware



Tree of life: Finished piece

3.3 CASE STUDY TWO: “TREE WALLS”

3.3.1 BACKGROUND SECTION

3.3.1.1 Introduction

This Case Study involved the commissioning of a series of large carved brick features for a regional housing association.

The proposed location of the commissioned work was in a new housing estate, being built as part of a large redevelopment of residential property on the outskirts of Middlesbrough where three sites had been identified by the client for decorative features.

The commission came about as a result of the development officer contacting the local arts board’s Public Arts Officer with the suggestion that a local artist might become involved in designing a piece specifically for the site.

The time scale was extremely short- only twelve weeks from initial designs to installation- and at the point at which an artist was to become involved, work on the housing development was nearing its completion, leaving little room for incorporation of artwork into early stages of design and planning.

3.3.1.2 Background to the commission

The possibility of a commission arose when the Housing Development Officer for a North East building society contacted the Public Arts Officer in Cleveland Arts offering an opportunity for artwork to be included in a major new housing development.

Rather than an artist being chosen through an open competition or from a short-list of artists, the commission was offered directly to the researcher as a result of the Public Arts Officer seeing a carved brick and ceramic piece being made for a previously completed site-specific project. This initial contact led to a more formal meeting being set up between Arts Officer and artist to negotiate the possibility of carrying out the commission using carved brick or large clay panels. The use of carved brick

would, he felt, would be the most appropriate material to make the features from; and could actually be incorporated into the walls as they were built.

Following the preliminary agreement to undertake the commission, it was left to the researcher to come up with some ideas and images whilst the arts officer arranged to meet the client in order to negotiate the terms of the agreement; timescale, costs, and artists brief before the commission could proceed further.

3.3.1.3 Site requirements

The sites identified for the artwork was three walls, measuring 4.6m X 1.7m, visible from the main road passing the estate and bordering the gardens of properties at the edge of sections of the estate. Their primary function was to shield these houses from the main road but the client felt that, with some ornamental feature incorporated, they might become visual sign posts introducing a sense of individuality to the housing estate, rather than remaining rather forbidding blank walls.

There was a high incidence of vandalism in the area which was of major concern to the client, which led to the request that proposed imagery should not be provocative in any way and that the work should not encourage climbing, be easily defaced or removed.

There were no major structural or safety requirements that the artist had to be aware of as the responsibility for installation of the walls was to be left to the contractors. Therefore the main requirements related to the size of the panels so that they could be easily tied in with a double wall made of standard sized bricks, and that the carved brick panels would be completely weather resistant.

3.3.1.4 The Artist's Brief

The artist was required to design, make and deliver to site three carved brick panels to be the front face of double thickness walls measuring 4.6m in length and 1.7m high.

Imagery;

- This was to be based around the theme of trees, drawing particular reference from the elm which was significant to the housing development site.
- The imagery was preferably to be non representational, but rather, decorative.

Practical details;

- If panels were designed, they were to be securely and permanently fixed to prevent removal or deliberate damage.
- The work should not be of such high relief as to be possible to climb on, although it should be clear enough to be seen from some distance.
- The work should not require any maintenance.
- The walls on completion should be coated with anti graffiti varnish.

Time-scale;

- The total time scale was approximately ten weeks including design work and installation.
- The work was to be completed within the building contract in order that the work could be installed by the bricklayers on site.

Arrangements, contractual details and communication were to take place through the Public Arts Officer as the artist's agent.

3.3.1.5 Funding and contracts

The commission was funded using money remaining at the end of the capital budget of the housing scheme. Rather than not use this and not be given the amount in future projects, the Housing Development Officer decided to allocate this to some artwork or decorative detail. Funding was also found for the areas around the proposed sites to be landscaped by the local council which would enhance the appearance of the development further.

The allocated budget covered design and making and essentially was a fixed sum, although the artist was asked to submit costs. The Public Arts Officer waived fees in view of the size of the commission, requesting instead that the finished project could be used in publicity material for Cleveland Arts.

The installation of the work was provided by the building contractors on site as part of the contract with the materials, unfired bricks, were provided as sponsorship in kind by a local brick manufacturers.

There was no formal contract drawn up, instead the artist was requested to draw up an estimate of the cost and the predicted timescale for designing and making the work for approval by the client and Public Arts Officer. It was decided that the artist would be paid directly by the client on completion of the work but that all communication and arrangements would be made via the Arts Officer. The most limiting aspect of the commission was that the work had to be completed within a very short time scale in order that it could be installed by the builders on site before the end of the main contract.

3.3.2 THE ROLES OF THE PARTICIPANTS

3.3.2.1 The client

As a Housing Development Officer the client's role was to represent the best interests of the Housing association and the prospective residents of the housing development by commissioning a piece of work that was appropriate to the site

and would be received well. It was also necessary in allocating part of a building budget to art that it would be generally considered to be a good decision and a worthwhile investment.

The client did not get involved in any negotiation relating to the commissioning process, preferring instead to delegate to a specialist organisation who could manage the project. He was however, responsible for identifying the sites for the work and made specifications about the nature of the work required, or more exactly the type of work that was not feasible.

The client set out initial requirements of the work requesting that imagery should be associated with the elm trees that formed such a focal point of the estate and outlined the practical requirements of the work regarding immunity to vandalism and maintenance. The relief carving should not be so deep as to be easily climbed on, and yet it should not be so low as to be obscure from a distance, the client suggested that 'anti graffiti paint' should be applied to the walls on completion.

At the early stage of negotiation, one of the three boundary walls had been built which the client was willing to have removed in order that carved brick panels could be integrated directly into the walls.

As the budget was relatively small and the time-scale short, the client also agreed to arrange that the bricklayers on site would install the work as part of the contractual agreement.

3.3.2.2 The artist

The role of the artist was to provide three carved brick features for a specific location designed in response to the client's requests regarding the nature of the imagery and practical aspects. The imagery was specified in very broad terms; that is, that the work should contain references to the trees and preferably purely decorative rather than anything figurative.

The researcher was invited to submit proposals at a late stage of the building contract and so there was not much time to spend designing and consulting with the client before starting to make the work. This could be seen as a case where an artist had been brought in as an afterthought in order to brighten up a new urban development; however, as the work was going to be built into the walls, the overall visual effect would be one of integration.

Although the walls backed onto the gardens of three properties that had already been sold, it was not part of the brief that the occupants should be consulted regarding the type of imagery that would be applied to the walls and which could visually have an effect on the overall impression of the houses.

It was left to the artist to try and devise designs within a time scale of approximately two weeks before starting to make the work, which was required to be purely decorative rather than contain any complex ideas

As the work was being installed by the site contractors the designs, making, firing and delivery to site had to be carried out to the builders schedule; leaving little room for error or modifications of designs. It became apparent, therefore, that it was important that the artist had a good knowledge of the material in order to prevent possible mistakes occurring at any stage, and also to be able to obtain suitable bricks for the job through negotiation with a local brick company.

3.3.2.3 The Public Arts Officer

The role of the Public Arts Officer was to find an artist able to undertake the commission and to recommend the artist to the client. Once the client had decided to commission work it was left entirely up to the Public Arts Officer to arrange meetings,

contractual details and then to manage and monitor the project as it developed through to installation and to ensure that the work was completed on time.

The Public Arts Officer was a central figure in this commission as there was no face to face contact between the client and the artist.

All communication and negotiation took place through the Arts Officer from initial discussions with the client regarding the nature of the work to presenting the artist's proposed ideas and plans promoting the designs which might be the most feasible within the site, budget and timescale.

On completion of the commission it was the responsibility of the arts officer to arrange for publicity photography of the work to promote the Regional Art Board's Public Art policy, the client and the artist.

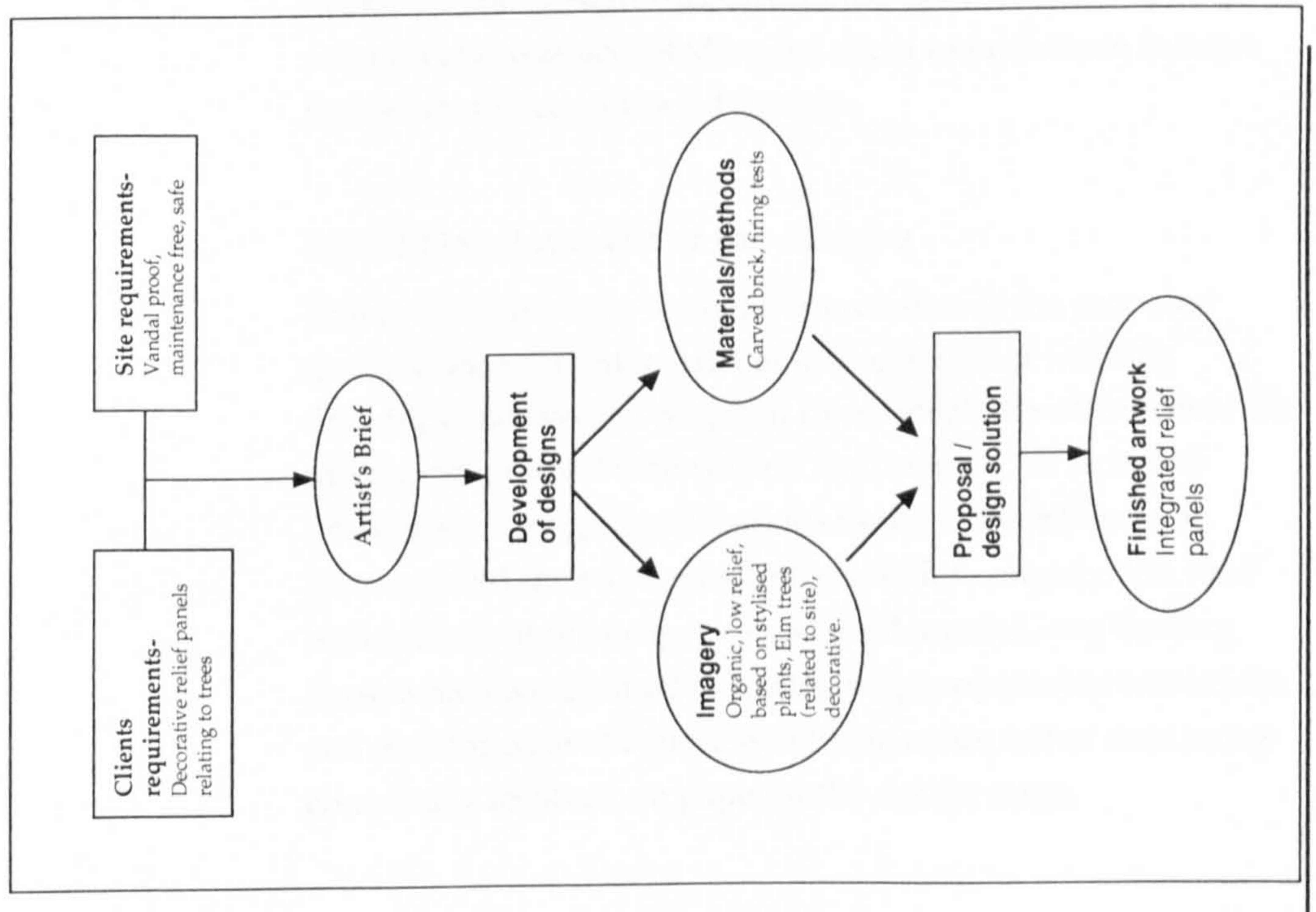
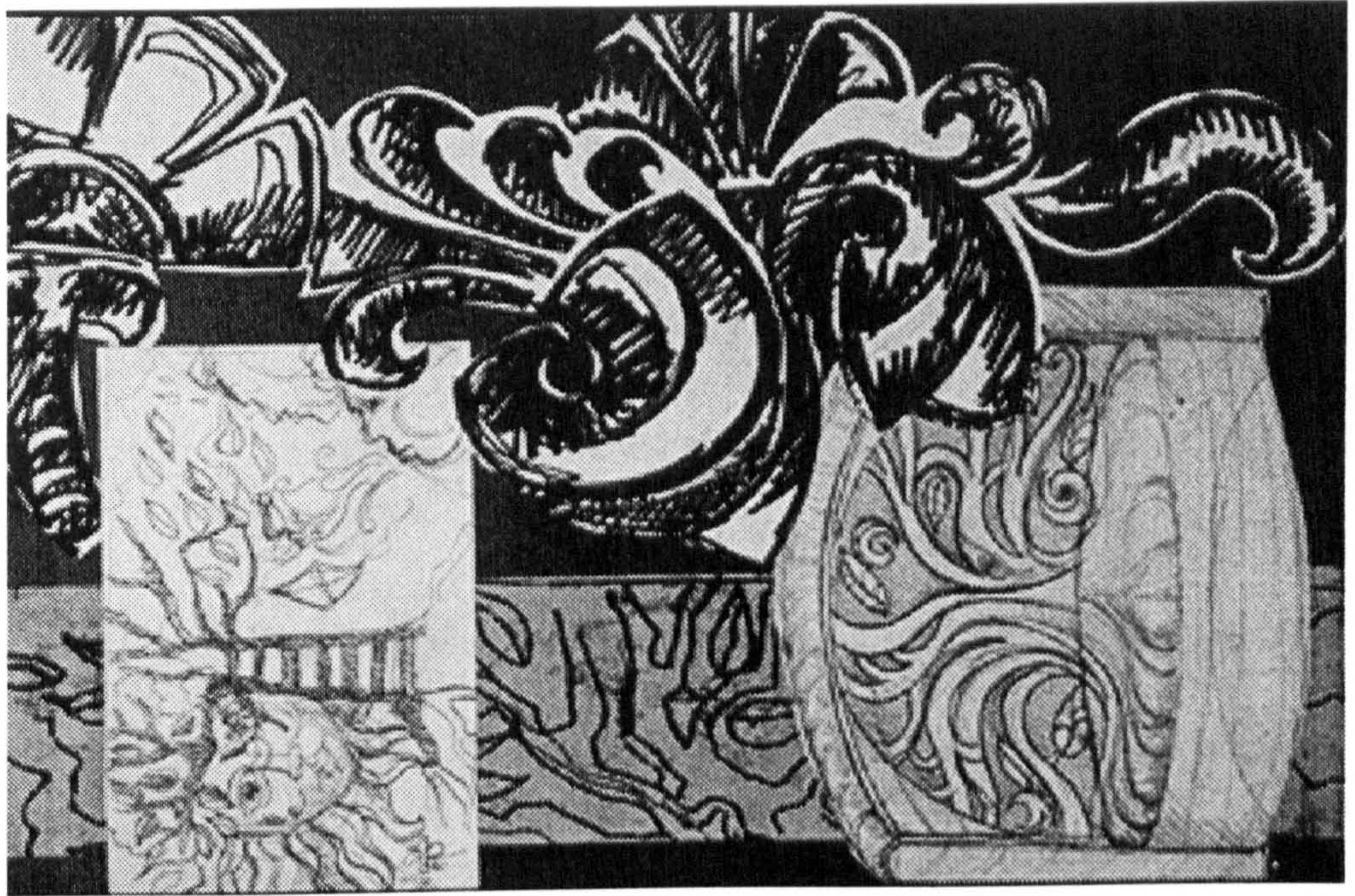
There was no contact with the architect in this commission as the artist was involved only at the end of the building programme.

3.3.3 ARTIST'S RESPONSE TO THE BRIEF

3.3.3.1 Sources of imagery/initial ideas

The main entry road leading through the estate was lined with mature elm trees which the clients had taken care in the planning of the estate to leave, in order to retain a natural element in an otherwise built up area. The estate was named 'The Elms' after these trees, and the client requested that imagery relating to trees should be incorporated in some way into the artwork.

Initial ideas were based around cast ceramic panels designed and attached to the faces of the walls. However, the walls were to be built on a curve which would make it virtually impossible to gauge the shrinkage of panels and to fix them exactly to surface.



Development of designs and imagery

Another suggestion was that the artist could provide smaller walls of a contrasting brick which would stand in front of the existing walls. This idea was rejected as the client and residents felt that litter would collect between the two walls. A design was for the walls to incorporate seating areas; however, this was also rejected by the client on the grounds that they might encourage loitering in particular areas of the estate.

The designs were modified to simply incorporating carved brick panels into the walls as they were being built; fulfilling all the requirements of the client as well as being the least complicated solution.

Sources of imagery were books of botanical engravings of plants and woodcuts which showed the forms in a simplified graphic style that would suit a large carving. References to the significance of the Elm tree as possible sources of historical or mythological connections and imagery revealed little other than that the wood has been often used to make coffins. A simple overall foliate design was considered to be the most appropriate solution and was accepted by the client in preference to more figurative and complicated designs.

3.3.3.2 Development of the designs

Due to the short time scale the submission of the proposed designs was very informal, being a selection of working drawings and written proposal from which the client chose the most appropriate. There was no requirement for technical drawings or design specifications as the architect was not involved and the work was being built into already specified walls. Much of the imagery was based around long flowing lines, which were suited to the technique of carving wet bricks, and developed as the piece was being made rather than being completely resolved on paper at the design stage.

3.3.3.3 Artist's proposal

To design and make three panels from carved buff coloured bricks, in keeping with the details in the surrounding architecture, window sills, string courses. These would depict flowing relief forms derived from trees, foliage and plants. The middle wall would show the central part of a tree, based on the shape of elm trees with images of changing seasons and weather represented as the sun, wind and rain on either side of the trunk. The other two walls would show plant forms and patterns extending outward on either side of the central wall as if branches from a central trunk.

The three walls were located at different points along the road through the estate and on the approach to the estate, but it was possible to see all three walls as if sited side by side. It was an aim of the design that the three walls should relate to one another visually and thematically as well as being able to be viewed as separate entities.

3.3.3.4 Materials and making methods (See appendix B)

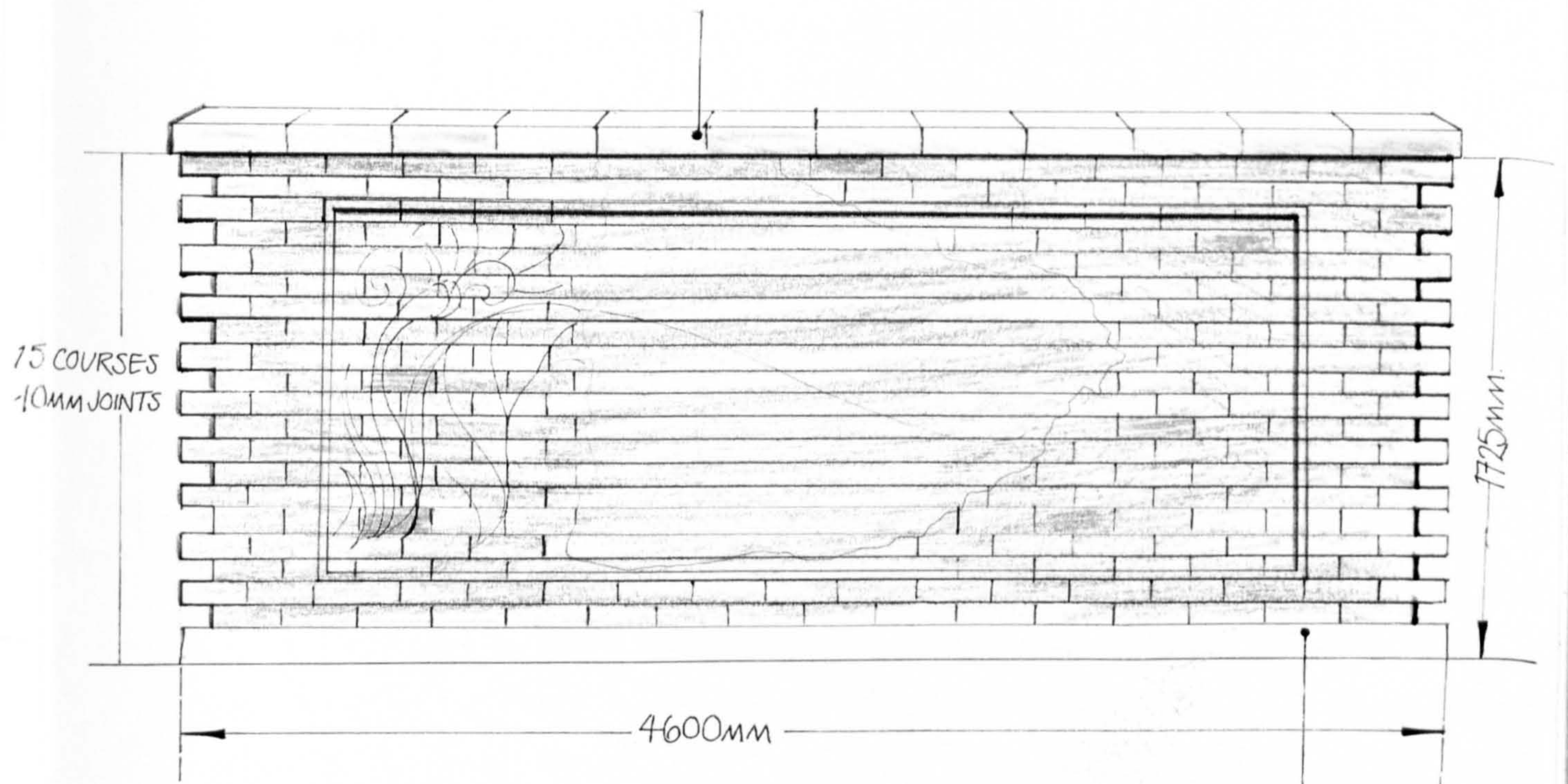
It was necessary to obtain accurate measurements of the walls in order to calculate the number of bricks required and how they should fit into the brick bond. In order to maximise the carving area between the joints the bricks were carved on the largest side. The green bricks were laid out in panels on the ceramic workshop floor and carved whilst slightly wetter than leather hard in order to achieve smooth lines without small detail crumbling.

The first panel was the full size of the wall face and incorporated the most complicated design. The other two were reduced in size to narrower panels that would be framed by the blank surrounding bricks and be sited on each side of the main wall creating a 'triptych' type of effect.

Initially it was intended that colour through glazes or contrasting brick would be used but this would have involved much more time than was available.

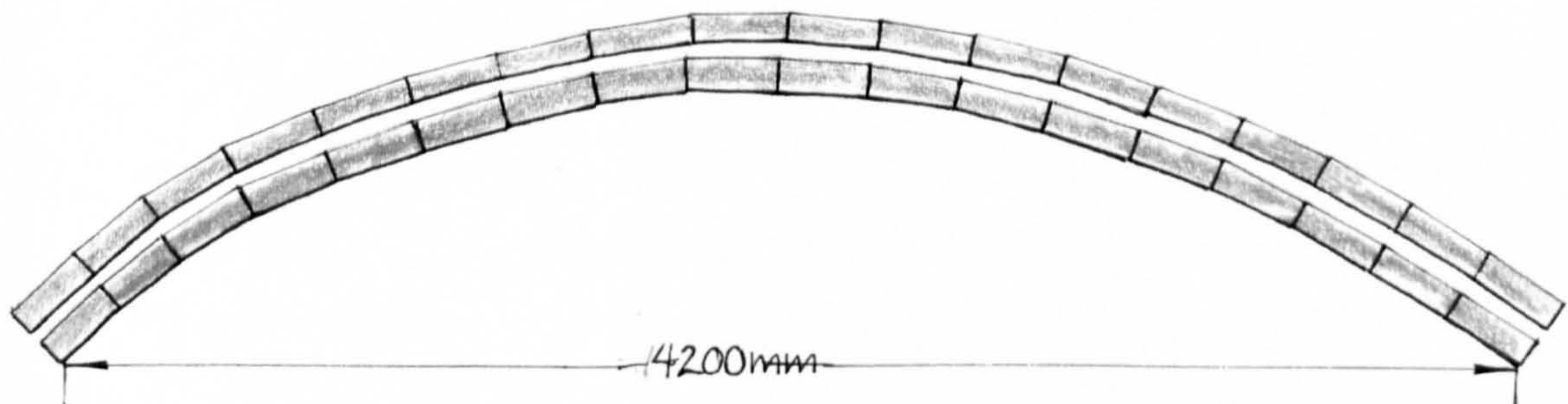
ELEVATION OF WALL
SHOWING BRICK COURSES
AND POSITION OF CARVED SECTION.

STANDARD MOULDED CONCRETE COPING



STEETLEY VICTORIA BUFF BRICK
FIRING TEMP 1120°C
TOTAL NO. 297.
ORDINARY MORTAR

2 COURSES OF
STANDARD RED BRICK



SECTION THROUGH WALL
SHOWING LAYOUT OF BRICKS
-TWO SKINS AND CAVITY - CURVED.

Plan and elevation of the carved brick walls



Completed artwork "Tree Walls"

3.4 CASE STUDY THREE: “A PILLAR FOR THE ESTABLISHMENT”

3.4.1 BACKGROUND SECTION

3.4.1.1 Introduction

This Case Study describes a commission for a ceramic sculpture to be designed and made for a University “satellite” campus within a renovated warehouse building. The commission was part of a programme designed to site art works, both permanently and temporarily, in the new building of which a modern stairwell was to be a focal point.

The programme was not publicly advertised, instead the art works were to be provided by members of the Fine Art department within the University and made in response to the building, in addition using an opportunity to display art work in a different setting to that of a conventional gallery space.

The work produced for the commission was required to be site-specific and in keeping with the essence of the original building and its history as well as with the new stairway. The resulting piece was very different in style to other work produced during the research programme.

3.4 .1.2 Background to the commission

The building identified to be redeveloped was leased from the City Council and was formerly one of a number of Georgian warehouses.

Although the building was listed as a building of architectural and historical importance, the redevelopment scheme aimed to incorporate aspects of modern functional design, using steel and glass, whilst essentially remaining sympathetic to the original character of the building. The architect’s idea was that panels of glass in a central stairwell and glass partitioning would enable the original structure to be seen rather than to conceal it beneath a modern facade.

The main focal point in the building was the main stairwell from which suspended platforms leading to class rooms, a library, and offices. Originally this area would have been the hub of the building, with merchandise being winched up to be loaded, unloaded and distributed. The architect wished to reflect this by designing the staircase as a centre of activity; associated with communal and educational establishments, as being a meeting place for users when moving around the different parts of the campus.

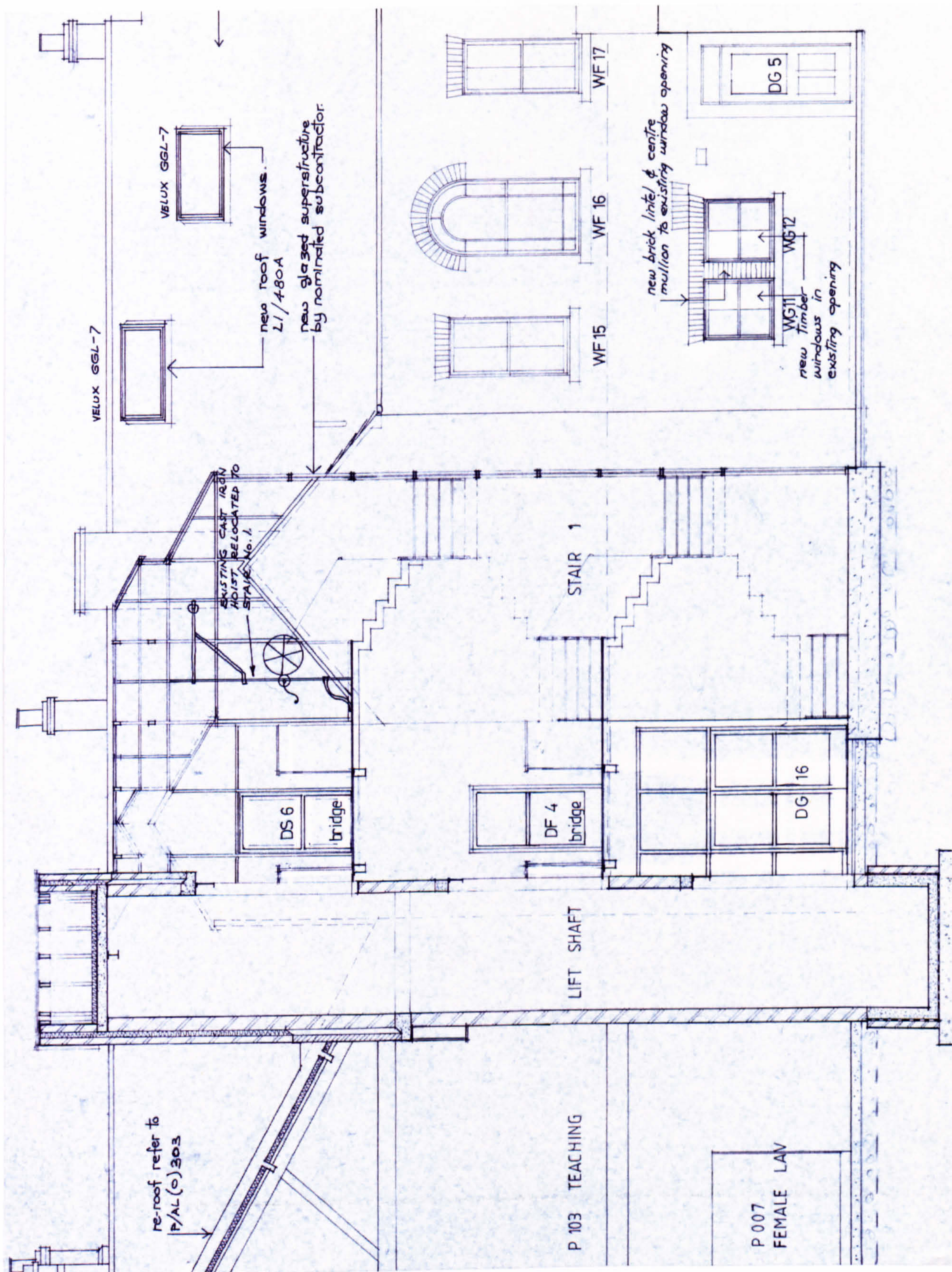
The main ground floor area encompassed an entrance and reception area with a passageway that led to a museum and art gallery next door. This was a public right of way during the hours that the museum was open and, although potentially posing a problem of security within the business school, it gave rise to the possibility of incorporating features for the entrances and stairwell that would be permanent pieces within a public space, whilst giving the opportunity for art works to be commissioned that would be specific to the business school.

In May 1992, a freelance arts coordinator was appointed to manage links between artists, architects, the City Council with the university as the client, to organise the funding, installing and exhibiting paintings, sculptures and gates commissioned for the business school.

After a number of meetings to discuss the possibility of a sculptural feature in the stairwell, the researcher was approached by the Dean of the Arts Faculty to put forward designs for a ceramic feature to be located within the stairwell.

3.4.1.3 Site requirements

The staircase designed by the architect was a very modern structure, constructed from steel beams, supports and columns running up through the main atrium area of the building. The steel framework, painted red, formed a framework within which



Architects plan of site

were fitted reinforced glass panels; a series of small etched glass blocks forming the stair treads with large panes of glass filling between the treads and the bannisters.

The roof and one side wall overlooking a small courtyard were made up of large glass panels creating a very light, open environment within a relatively small, enclosed space. The staircase circled around the stairwell, rising through two floors with the supporting pillars extending up to the roof. Situated at the top of the stairwell above the second floor was a cast iron winch which existed within the building during its use as a warehouse. Such a tall narrow space enclosed by a strong framework, particularly with the red steel pillars introducing a dominant colour, immediately required the sculpture to be visually responsive to the structure without being in conflict; in terms of form, scale and colour.

Access to the space was potentially extremely difficult for installation of anything awkwardly shaped or very heavy, but there was easy access to the work from the stairs. It was necessary, therefore, to consider the safety of any suspended work and of the users of the staircase.

Although the site was located within a very old building, the immediate surroundings of any artwork in the stairwell were those of a very modern, functional structure; it was this aspect that dictated what type of piece should be designed.

As the staircase allowed a 360 ° view point of the central space, it was necessary to design a piece that could be seen from all around and which could reflect the upward movement of a stairway. It had also to be interesting to look at from above, below, and on the approach to the stairway from the main reception area and rooms leading off it on every floor.

It was necessary to consider the influence of different types of lighting within the space; with so much glass the area would be very light during the day and especially the summer, however at night this was replaced by artificial light which along with the

darkness outside made the glass panels into reflective surfaces; This gave the space a very different effect which could significantly alter the visual impact of a piece .

As the work was not going to be in a generally accessible area, there was no danger that it might potentially obstruct exits. The main requirement was that the piece be secured to prevent any likelihood of its collapse if touched, or of its causing any strain on the structure of the staircase.

3.4.1.4 The artist's brief

The brief was developed as a result of discussion between the architect, the projects officer for the new campus, the Dean of the Arts faculty and the project coordinator

- The artist was required to design, make and install a sculptural or decorative feature to be installed within the new main stairwell in the business school.
- The piece should be able to be viewed from every side, as well as being visually interesting from the top and bottom of the stairs.
- Imagery-This should relate to the historical aspects associated with the site and with surrounding buildings and features identifiable with Carlisle, such as the cathedral, castle, museum etc. .
- Structure- The work should incorporate or make use of an existing cast iron winch which has been moved to a position at the top of the stairwell.
- Maintenance-It was necessary that the work required a minimum of maintenance and would pose no risk to users of the staircase; bearing in mind that the staircase will be in almost constant use by students and staff of the business school.
- Safety-The work should be securely and safely fixed so as to prevent undue movement, and so minimise the possibility of damage either to the work or to the stair user.

3.4.1.5 Funding and contracts

There was no fixed capital for the commission: the artist's fees were covered by contract with the university and the cost of materials, transport and installation were paid for through a fund allocated for art in the business school, along with funds raised through grants and sponsorship sought by the project coordinator

There was no formal written contract: it was decided that the work should be installed in time for the opening of the new building in September 1992 giving approximately four months to complete the commission.

3.4.2 THE ROLES OF THE PARTICIPANTS

3.4.2.1 The client

In this project the University was technically the client, but there were a number of parties involved in initiating the arts project who had an interest in what type of work might be designed for the stairwell.

Representatives from both the Art and Design faculty and the Business School were involved with the project, along with members of Carlisle City Council and representatives from the Museum who shared an access through the building.

The project manager appointed to coordinate the redevelopment of the Carlisle site was present at the meetings to discuss the type of imagery that might be suitable and was available to advise on possible sources of funding, materials and makers.

None of these people put forward any definite requirements or suggestions regarding the form or content of the sculpture other than voicing very practical concerns that it should be safe, maintenance free and would be suitable for a public space.

3.4.2.2 The artist

The role of the artists throughout the whole arts project for the new university campus was to introduce contemporary art work made at the university into an environment which has links with artifacts and objects with historical significance but was not a conventional exhibition space. The work commissioned to be placed in the stairwell was required to be permanent.

The artist's role in designing this piece was more tightly constrained by consideration for the proposed location of the piece, the brief and the requirements of the client.

All of these factors called upon the artist to be able to assess the problems involved and to arrive through the process of design at an artistic solution that was appropriate to the site and made in a way that is appropriate to the form and imagery contained in the designs.

As the site did not initially appear to be suited to the inclusion of a ceramic work a great deal of research was necessary, prior to making, into materials that would be strong enough and yet light enough to hang from the winch through the length of the stairwell. This involved collaborating with the architect on technical aspects of the design, and also discussion of materials that would be visually suited to the site.

For most of the duration of the contract the artist was left to make decisions regarding design and imagery, liaising with materials specialists as was necessary, and to report occasionally on the progress of the commission to the Dean of Faculty.

3.4.2.3 The architect

Specific requirements for the stairwell commission were proposed by the architect who was responsible for the design of the staircase and entrance area and for the refitting of the interior of the building.

It was the architect's idea to have a cast iron winch moved from its original position in the top floor room of the warehouse to a new location at the top of, and overhanging the stairwell. This

winch, as well as being an interesting object was seen to be significant in linking the new use of the building as part of a university with its previous use as a warehouse and he felt that it was important that it should be incorporated in some way with any artwork designed for the stairwell space.

This, he suggested, could be as a means of support for a hanging piece or to anchor a feature to the top of the stairwell that might rise up from the floor beneath. It might also be incorporated visually in some way by making references to the past use of the building and so the use of the winch. The architect was the main point of contact for the artist when visiting the site and was able to advise on structural specifications of the stair case.

3.4.2.4 The Project Manager

The project manager was employed by the University to supervise the commissioning and siting of art works in the new campus, and to organise an ongoing programme of temporary installations and shows. He was also responsible for raising capital from regional arts boards and industrial sponsorship to finance major site-specific commissions such as for gates and sculptures, and to seek publicity for these projects that would promote the University.

Most importantly he was to ensure that there was clear communication between all the parties involved in the arts programme.

3.4.3 ARTIST'S RESPONSE TO THE BRIEF

3.4.3.1 Sources of imagery / initial designs

This section aims to outline the process that was followed from the initiation of the commission by the setting of an artists brief, through various stages to the final solution and finished piece of work.

The site itself and suggestions regarding subject matter made by the client in the artists brief influenced the choice of possibilities for subject matter and how to go about compiling ideas and images.

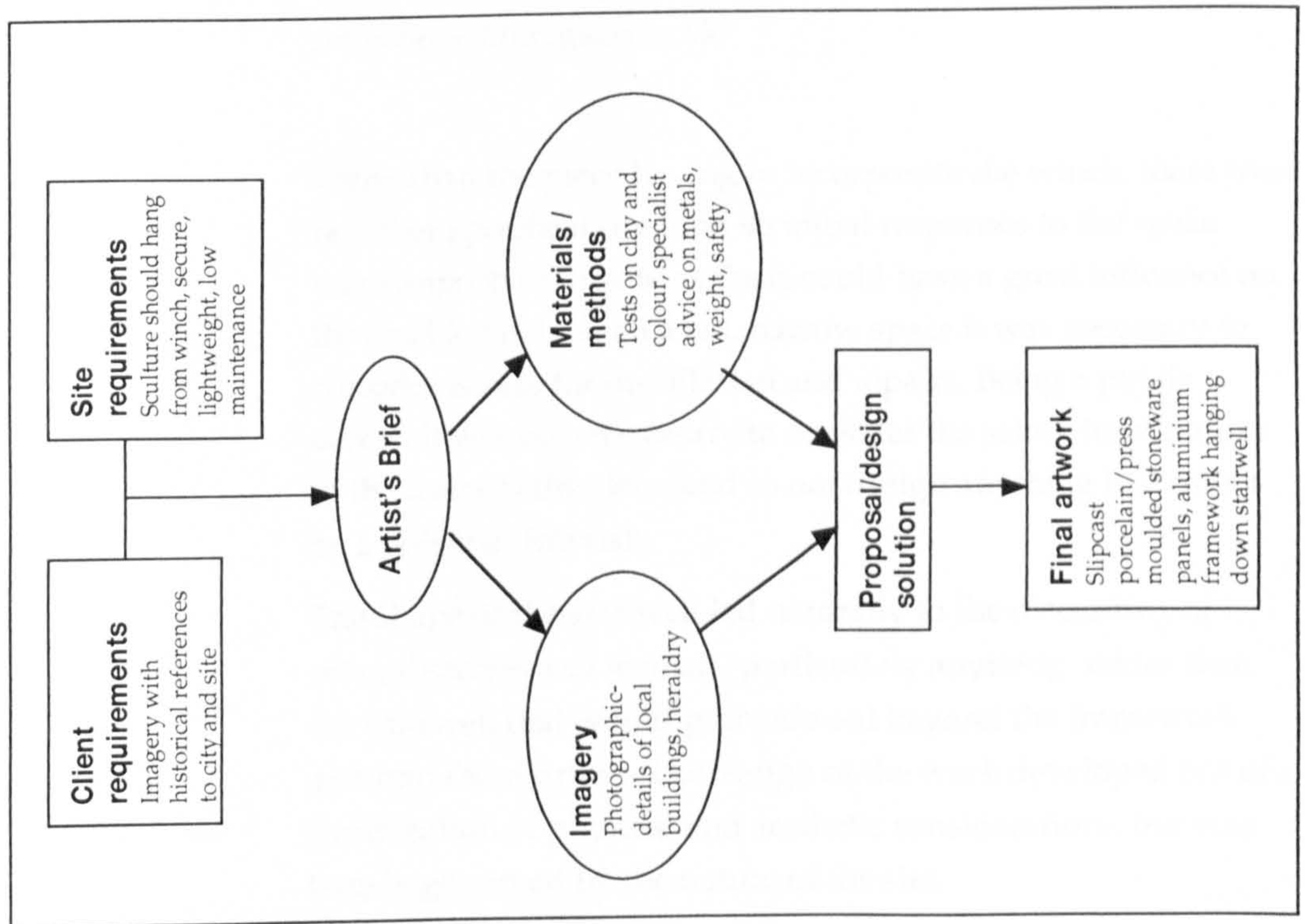
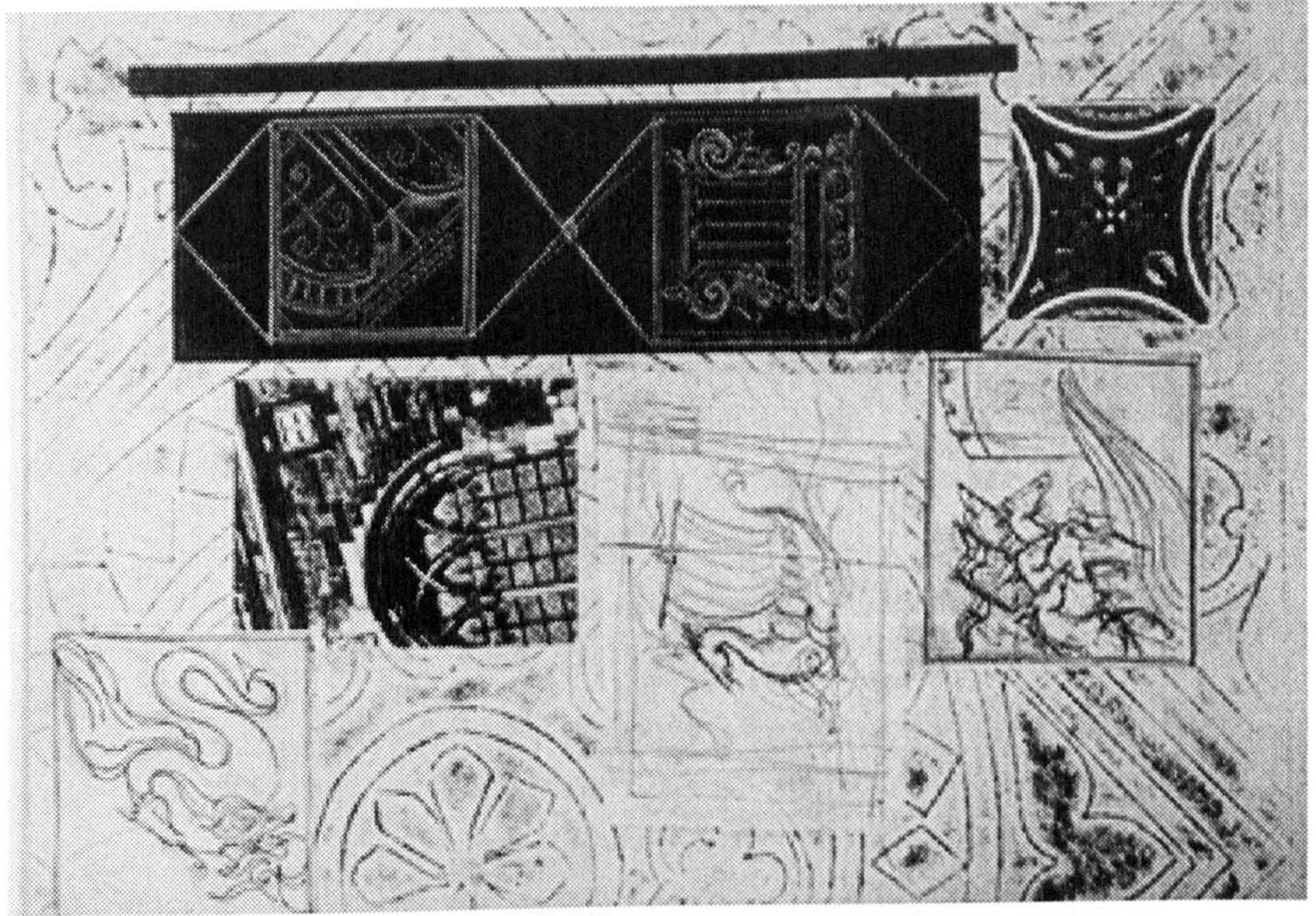
An interest in architectural details led to areas and details in old buildings in and around Carlisle. These also related naturally to the site which was itself a building with a great deal of historical interest in terms of use, structure and details.

- Choice of subject matter / references- Architectural details, Historical references
- Methods employed to collect visual information- Photography, photocopies from historical patterns, sketches.

By taking photographs of small areas of buildings it was possible to obtain an image that was not immediately identifiable as a particular building, such as a general picture might convey, but was an attempt to capture an element of the building that registered the character or style in a less obviously illustrative way. For example, photographs taken of the cathedral were not of overall views but of details and sections of windows, stone carving or tracery which contained interesting compositions or shapes. It was intended that these might suggest the cathedral by capturing a fragment of the total image. Other photographs were of details of decaying brickwork or stone masonry tinged green with lichen, but still just recognisable as the lintel of a doorway.

The history of Carlisle was intimately bound up with the architecture of the city with old walls and buildings left for centuries to decay, built over and redeveloped revealing much of the city's past, with many old buildings hidden creating a feeling of discovery when noticed.

It was the aim of the designs to capture the essence of these ruins through fragments.



Development of designs

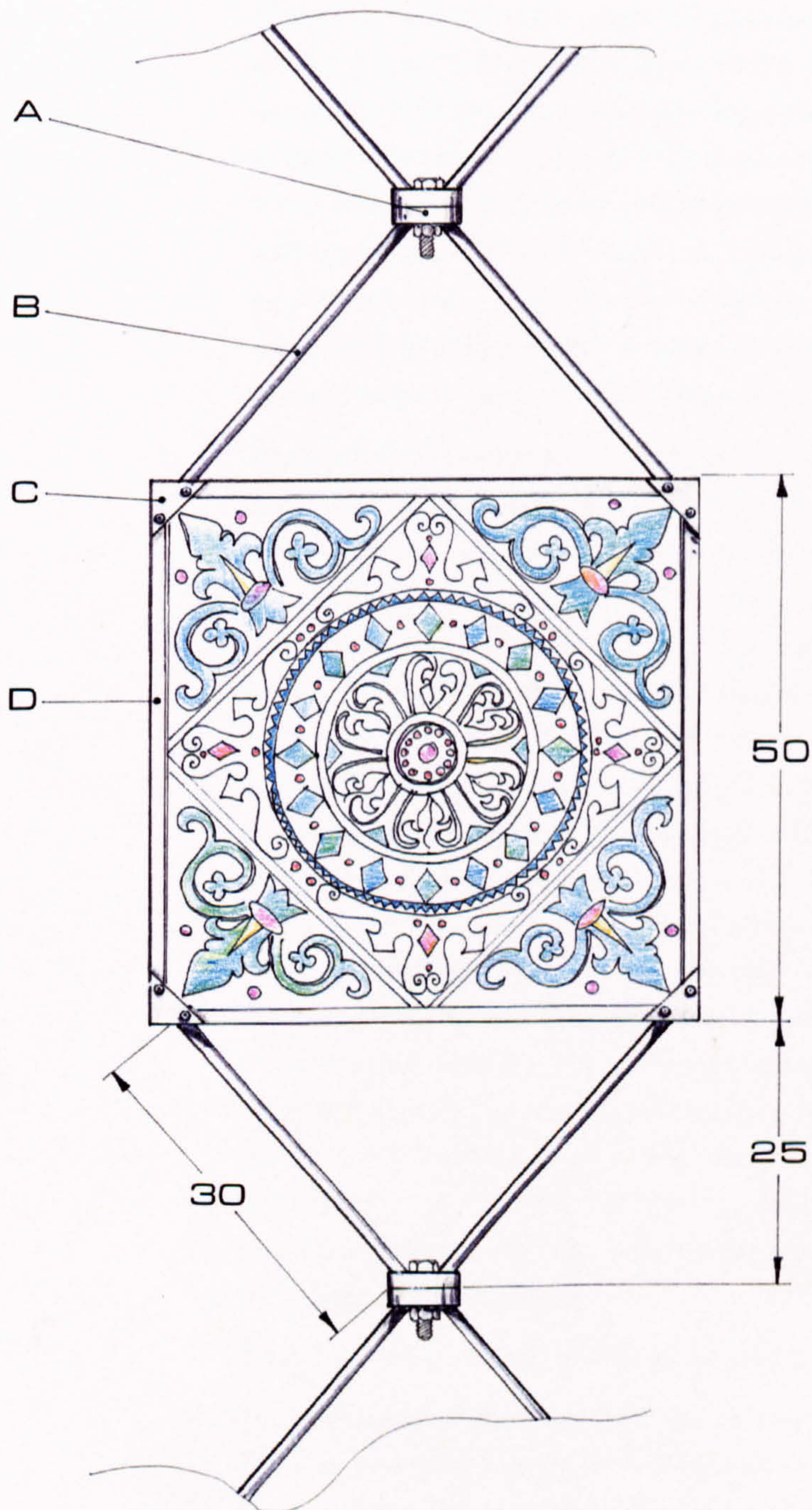
3.4.3.2 Development of designs

The development of the design involved the consideration of physical factors, not least that the stairwell measured 1m x1m x 7m high. These dimensions along with the nature of the space appeared to be more suited to textiles, banners or floating kite structures than ceramic. It was necessary, therefore, to design a piece that reflected this quality of structure and light.

- Considerations of specific requirements-use of winch, height / width restriction safety
- Environmental factors which may affect the work- lighting, heating, wind
- Physical factors-vibration of stairs, cleaning & maintenance, access for installation, weight loading on stairs and winch, dimensions of the space.
- Other influencing factors- colour - red steel supports, reflection- from glass, scale

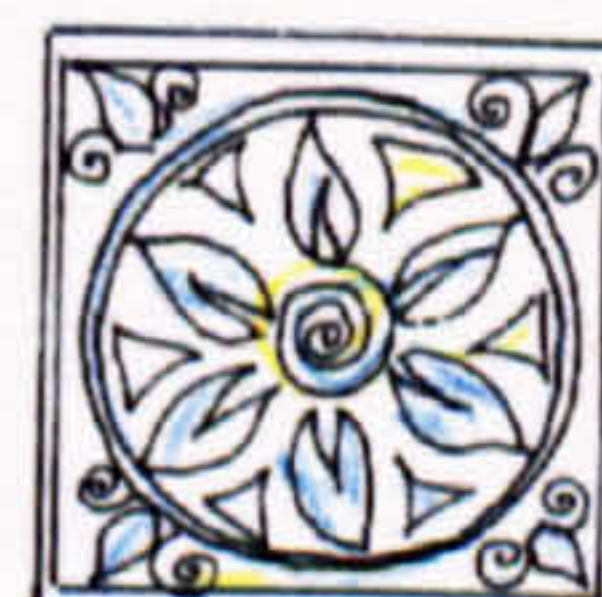
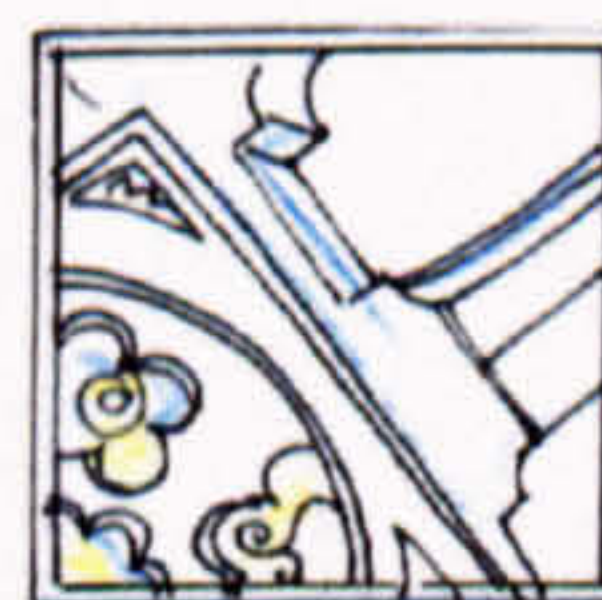
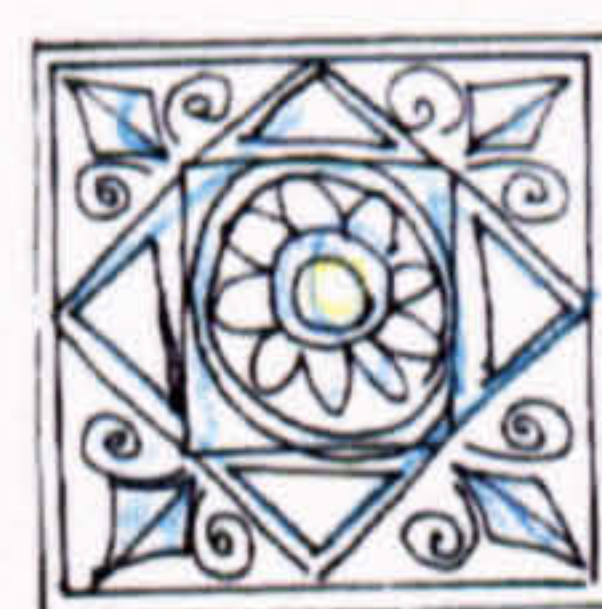
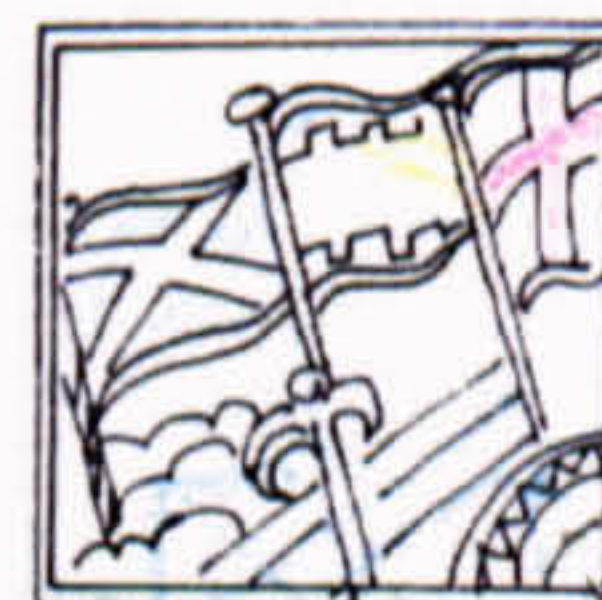
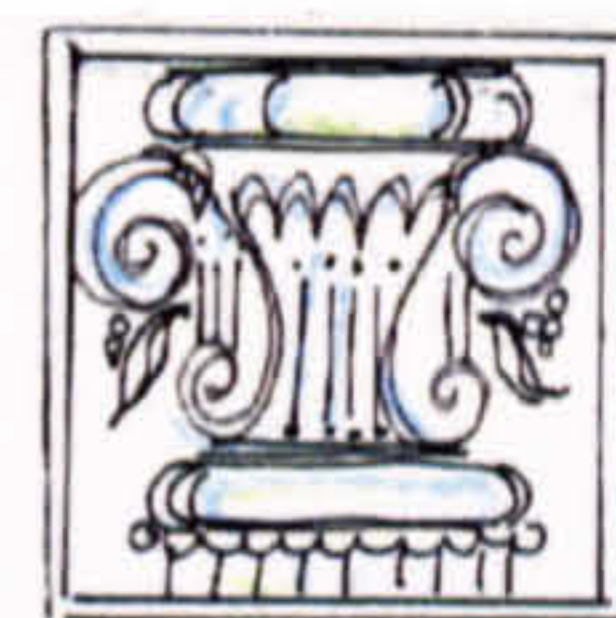
Other than the piece having to incorporate the winch, there were no other specifications; and so initial responses to the space were important to note as these could have a great influence on the final form. In such a tall, narrow space it was necessary to consider access for installation and repairs. Being a public access, it was also necessary to consider the safety implications of the users of the stairs and to not design anything that might be a potential fire risk.

The shape of the stairwell led naturally to the discarding of several shapes and formats, particularly anything wider than the stairwell that would protrude out beyond the framework and into the stairway. The design of the work developed out of a combination of physical and aesthetic considerations, but was largely governed by the nature of the site.



DIMENSIONS IN CMs.

Design of panels



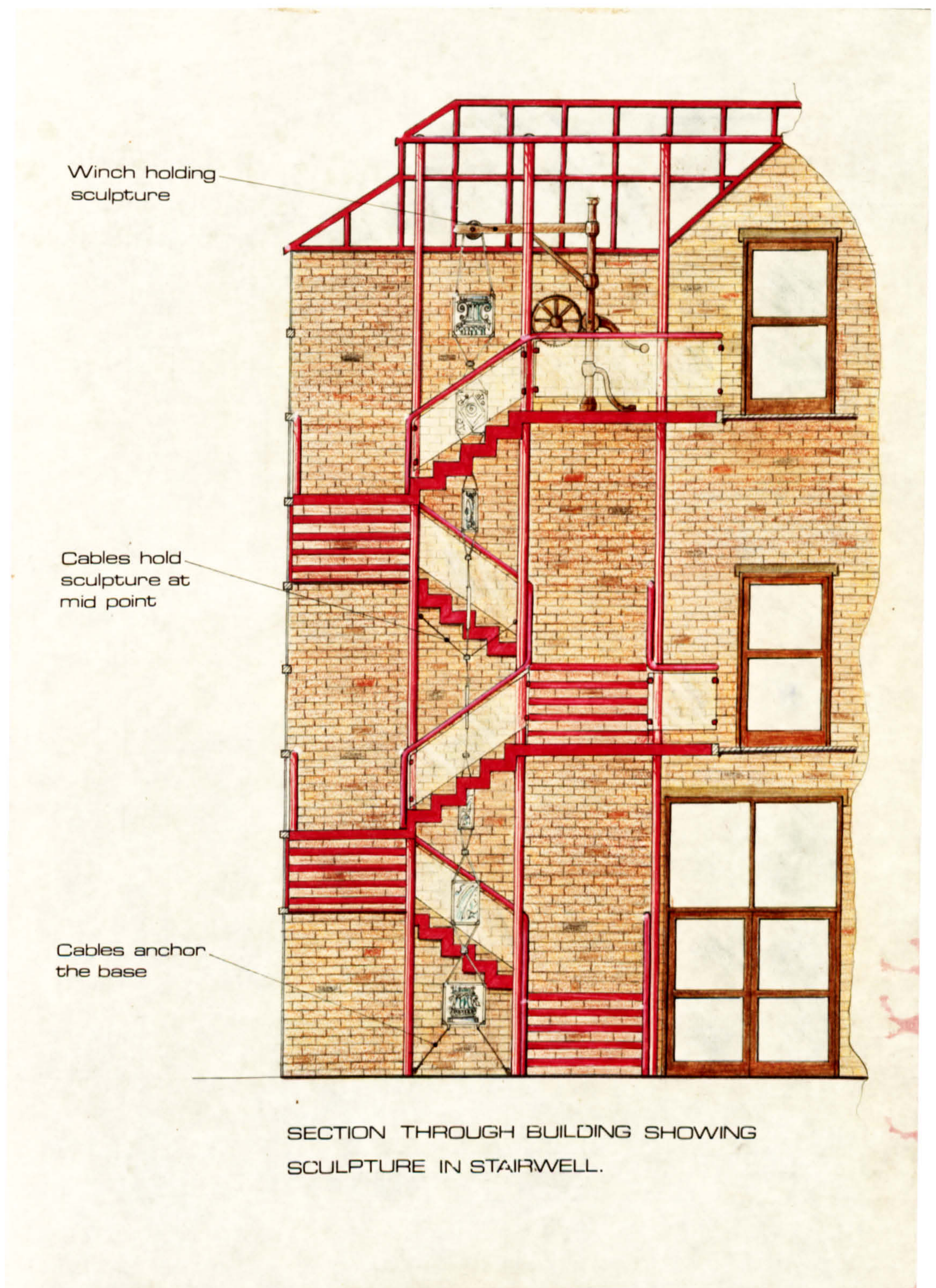
3.4.3.4 Artist's proposal

Due to the nature of the space it appeared to be appropriate to design a feature that would relate to the 'hi-tech.' structural nature of the immediate surroundings; that would be strong enough visually to withstand domination by the steel frame work; and yet to reflect the subtle qualities of the glass panelling as it changes in the light. Initial designs, therefore, attempted to encompass both these qualities while also incorporating elements that reflected the historical references that were alluded to in discussion with the architect and client.

The proposal was for a series of very thin, possibly translucent, cast porcelain panels incorporating images printed and embossed on their surfaces which related to Carlisle's architectural and historical past. The top and bottom panel were based on the capital and base of a classical column with different images in between. These would be held within a stainless steel framework for reinforcement and hung by steel cable from the winch. Each panel would be positioned one above another throughout the length of the stairwell with each one spun into position at an angle around the central axis, thus giving a changing view point and the visual effect when seen from above or below of a helix form. To prevent unintentional movement the panels would be bolted together, through a series of rods welded to the steel frames, giving the whole piece a rigid structure resembling a string of beads rather than having the panels freely hanging from cable. The piece was then designed to be hung from the winch at the top and anchored at a mid point and at the foot of the stairwell to create tension throughout the whole chain of panels.

3.4.3.5 Materials and making methods (see Appendix B)

Porcelain immediately seemed to combine lightness with strength however having never worked with it before, it was necessary to run many trials. The method chosen to obtain very thin panels was to pour porcelain slip onto plaster panels incorporating an engraved image that would be seen in relief on the surface of the panel when fired. To this elements of colour



Finalised proposal for stairwell panels

were added using coloured stains applied to the raw clay and fired on. The panels were made oversized to allow for 15% shrinkage in firing to 1260° C.

On the reverse the same image was printed in monochrome, using iron and manganese oxides in a water-based printing medium. This was printed off a latex sheet which had been cast off the plaster panels resulting in a raised image which, when 'inked' up using a roller, and carefully pressed into the back of the porcelain as it was drying, gave a black and white image the reverse of the embossed image.

There were ten panels in all measuring 50cm x50cm when fired. Many warped or split in firing as the porcelain was so fragile, and had to be replaced with a white stoneware.

It was decided that a stainless steel framework would not be suitable for a number of reasons: it would be too heavy and expensive, and its shininess would detract from the panels. Instead aluminium channelling was chosen as a lighter alternative. The frames were riveted together with the panels inside, and were bolted together through a series of rods and turned washers. The whole piece was suspended from the winch using galvanised steel cable.

Once installed it resembled a string of protein molecules or a DNA structure when in place as the panels were offset to create a helical spiral up the length of the stairwell.

3.4.4 Summary

- Site: Renovated building- University campus main stairwell
- Funding: "In house" materials only
- Participants: Client (University), artist, architect, project manager
- Imagery: Historical references, to city and buildings (site-specific)
- Materials: Porcelain/ 'Y' material, aluminium, steel cable



The finished artwork

3.5 CASE STUDY FOUR: WADHAM COURT DOORWAY

3.5.1 BACKGROUND SECTION

3.5.1.1 Introduction

This Case Study describes a collaboration between an architectural firm, a local housing association as the client, a building firm and the artist/researcher. The commission involved the design and making of a major decorative feature for a new sheltered housing scheme located within Tyne and Wear.

The significant characteristic of this case study was that the commission was initiated by the architect. As outlined earlier in the research (section 2), partnerships and teams were formed between all parties involved with the completion of a new building from the outset of the contract and supervised by the architect who was accountable to the client.

In this project, the architect had previous experience in working with artists and the client was interested in art. When the researcher was initially approached, the architect had already some idea about a decorative feature being incorporated into the building design and had indicated on his plans key locations for the incorporation of decorative features.

3.5.1.2 Background to the commission

During the early stages of the research programme, the researcher contacted the architect requesting information on a previously completed art and architecture project that he was involved in. After some length of time, a reply was received suggesting a meeting to discuss the possibility of undertaking a commission for site-specific feature for a building that he was designing for a regular client; a new housing development for a local housing association.

The regional assistant director of the housing association and the architect decided to base the layout of a new sheltered housing scheme along similar lines to the older Oxford colleges.

The plan of the building was based around the quadrangle, with the main windows facing inward, generating a sense of community and security, a feeling which the architect deemed important in a building designed specifically to accommodate the elderly. A feeling of privacy was intended to be created by the outer walls effectively shutting out the world outside, leaving the quadrangle as a central focus and meeting space for the people living within the scheme.

Within this type of building there is a sense of order; with rooms for privacy, living and study, and communal spaces for lectures, meeting and dining. The plan of private rooms was similar with larger rooms designated in each wing for tutors, and communal spaces positioned centrally on the ground floor. Similarly in the plan of the sheltered housing scheme, these rooms were designed for the accommodation of a resident warden, laundry facilities and a large common room, whilst private flats occupied the remainder of the building.

Visually the architect aimed to be faithful to the original college layout. The main entrance was a centrally positioned archway leading directly into the quadrangle, and opposite on a south facing wall was a main entrance from ground level to the roof. The entrances to the wings of the building were located at the corners of the quadrangle with small doors bringing a sense of human scale to the building as well as a feeling of privacy.

In many of the older colleges, and again in other buildings of similar plan, this main doorway would be surmounted by a sundial and very often some heraldic feature and establishment date. The architect and client visited Oxford to photograph and measure quadrangles researching the proportions of the college buildings, and jokingly decided that they should incorporate a sundial into the modern scheme as well as having some visual emphasis above or around the doorway similar to that of the

traditional college, giving an identity to the scheme by incorporating artwork relating to the housing association and the origin of the design.

It was at this point in the design process that the architect decided to approach the researcher, and commission the design and making of a ceramic or brick feature to enrich and emphasise this main doorway.

3.5.1.3 Site requirements

Most of the requirements have already been alluded to in the background section, that the work should as in the past be a visual focus of the quadrangle.

There were no major complications with this commission as regards special requirements, e.g.. for access. The housing scheme was built on an extremely exposed site with strong winds and mists and rain coming off the sea close by. The high winds necessitated secure fixing, particularly for the sundial; whilst salt in spray carried from the sea posed a potential threat of severe corrosion and damage to the surface of ceramic.

The main requirements were:

- Maintenance- The work was to be completely weather proof and to require no maintenance
- Safety-The work was to be permanently and safely fixed
- The work should not interfere with the opening of windows and doors nor have anything protruding from the surface that might potentially dangerous
- Visual-The work should visually relate to the building taking into account the colour of the brickwork, windows and doors and the overall scale of the housing scheme

3.5.1.4 Artist's brief

To design, make and install a range of decorative elements to be incorporated into a new sheltered housing scheme, to be made of ceramic and brick and built into the fabric of the building. The visual focal point of a doorway on the south facing wall had been identified as the main site for embellishment with a sundial positioned above. Other decorative features in the scheme were to reflect elements of this main feature.

The imagery was to be decorative, without necessarily being illustrative, for example of the history of the area, and was in some way to incorporate the logo of the housing association. The imagery should be largely traditional, in so much as it should complement and adhere to the thinking behind the design of the building with its relationship to historical college buildings.

The work was to be site-specific, taking into account the architects' and clients' vision of the sheltered housing scheme as a whole, the character of the building and nature of the purpose of the scheme, as well as considering the people who would be occupying it.

3.5.1.5 Funding and contracts

The artist was required to submit costs for the commission and estimated time scale for approval by the housing association board of directors. At the first meeting with the clients, they stated that they could not be seen to put much funding into artwork as all their costs had to be bid for. As a result a fairly low budget was agreed which was supplemented by materials being provided by a local brick manufacturer as sponsorship and support by the University. The clients decided with their quantity surveyor and clerk of works that the artwork would be described officially as decorative brickwork in order that the allocated budget would not be queried by the board of directors.

**In another sheltered housing scheme designed by the same architect, paintings and prints by local artists were specially bought and written off as "decorative wall covering".*

Housing associations must account for their budget and raise capital for new housing schemes through the bidding for grants. As art is not eligible for a grant, not being strictly speaking a necessity; such a client has to find ways to pay for artwork by other means, such as, by concealing the cost in the budget by describing it as something that would appear to be necessary.

There was no written contract drawn up but the artist received written confirmation of details agreed at the meeting where the proposals were approved along with a building schedule.

3.5.2 THE ROLES OF THE PARTICIPANTS

3.5.2.1 The client

The commissioning agent for this project was a locally based housing association which had worked with the architect on a number of housing schemes within the Tyne and Wear region. This particular scheme was to be one of the most prestigious of their buildings, which gave an incentive for the directors to agree to the inclusion of some form of purpose-made artwork to be incorporated in the designs.

The Director of the Housing Association, who was initially involved with the project, retired early on in the project and was replaced by the assistant director. This did not affect the progress of the commission in any way as the assistant director had a great deal of personal interest in the scheme, and was largely responsible for the setting of an artist's brief.

As the representative of the Housing Association, the Director had an important contribution to the general design of the building and in seeing the value of including artwork to increase the prestige of the development. As well as seeking to enhance the quality of the building and therefore the reputation of the Housing Association, the client sought to make decisions in the design of a building that would be in the best interest of the residents, as they were not able to be directly consulted at the planning stage.

It was also the responsibility of the directors and the architect to decide that the art input was important enough to the housing scheme to be prepared to find funding for a large site specific

work. This was achieved by the ceramic details being described as “special and moulded bricks” on the quantity surveyor’s report in order to keep costs to a minimum.

The director maintained an interest in the art project throughout the duration of the contract and, if not at site meetings in person, was kept informed of its progress through the architect or a Clerk of Works.

3.5.2.2 The artist

Rather than it being an open or limited commission, this commission was initiated by the architect approaching the researcher on the strength of a prior recommendation and knowledge of previously completed commissions within the region.

The role of the artist in this commission was to work in liaison with the architects, after an initial brief set by the client, to produce a decorative ceramic feature; a doorway, along with smaller integrated features or details which would reflect the character of the site and themes occurring in this main feature.

Working from ideas and suggestions put forward by the client and the architect at an early stage, it was necessary to interpret the initial suggestions and requirements and to realise them in the final artwork.

In general, the artist’s brief was unrestricted other than to request that the work be in keeping with the architects designs, be decorative and that the housing association’s logo should be incorporated in some way. As part of the early negotiating process, in order to demonstrate the artist’s ability to carry out the commission and to show the style and nature of the artwork, the clients were shown a portfolio of previously completed work. The directors had no clear idea of what they wanted: it was therefore left to the artist to work with the architect in developing ideas as to the type and position of ornament that might be most appropriate, whilst the actual development of

imagery and composition was entirely left in the hands of the researcher. With this commission there was the added advantage that the architect had enough foresight and knowledge to bring an artist into the project early on in the design stage. This meant that designs for the ceramic details could be developed and worked in with the architects' plans and timescale with decisions being made at an early stage regarding the nature and position of the features, the result being that the overall composition of the work in relation to the building would be stronger; and ways could be found to install the work into the fabric of the building, rather than it being added on as if an afterthought.

3.5.2.3 The architect

There were two architects involved with this commission: the senior partner of the firm was responsible for the instigation of the project and initial suggestions to the client that an artist might become involved, while management of the contract was taken over by a project architect after the initial negotiation and design stage had been accomplished .

The main role of the architect at the first stages of the project was to introduce to the client the idea of bringing an artist into the design team and then to act as a mediator, bringing the artist and client together to facilitate the inclusion of artwork within the new building, and to initiate ideas of imagery and content of the work.

The architect also initiated the design process of the artwork by working closely with the client in order to come up with the overall concept behind the building's design: basing the layout of the sheltered accommodation for the elderly on an Oxford college, as series of private apartments and communal spaces built around a courtyard. The result was a very personal design

and so it was equally important for the architect to make sure that the artist's designs would reflect the nature and character of his designs as well as the vision of the clients.

Throughout the duration of the commission the architects were the main link between the artist and all other parties involved in the building scheme-clients, building contractors, surveyors and clerk of works.

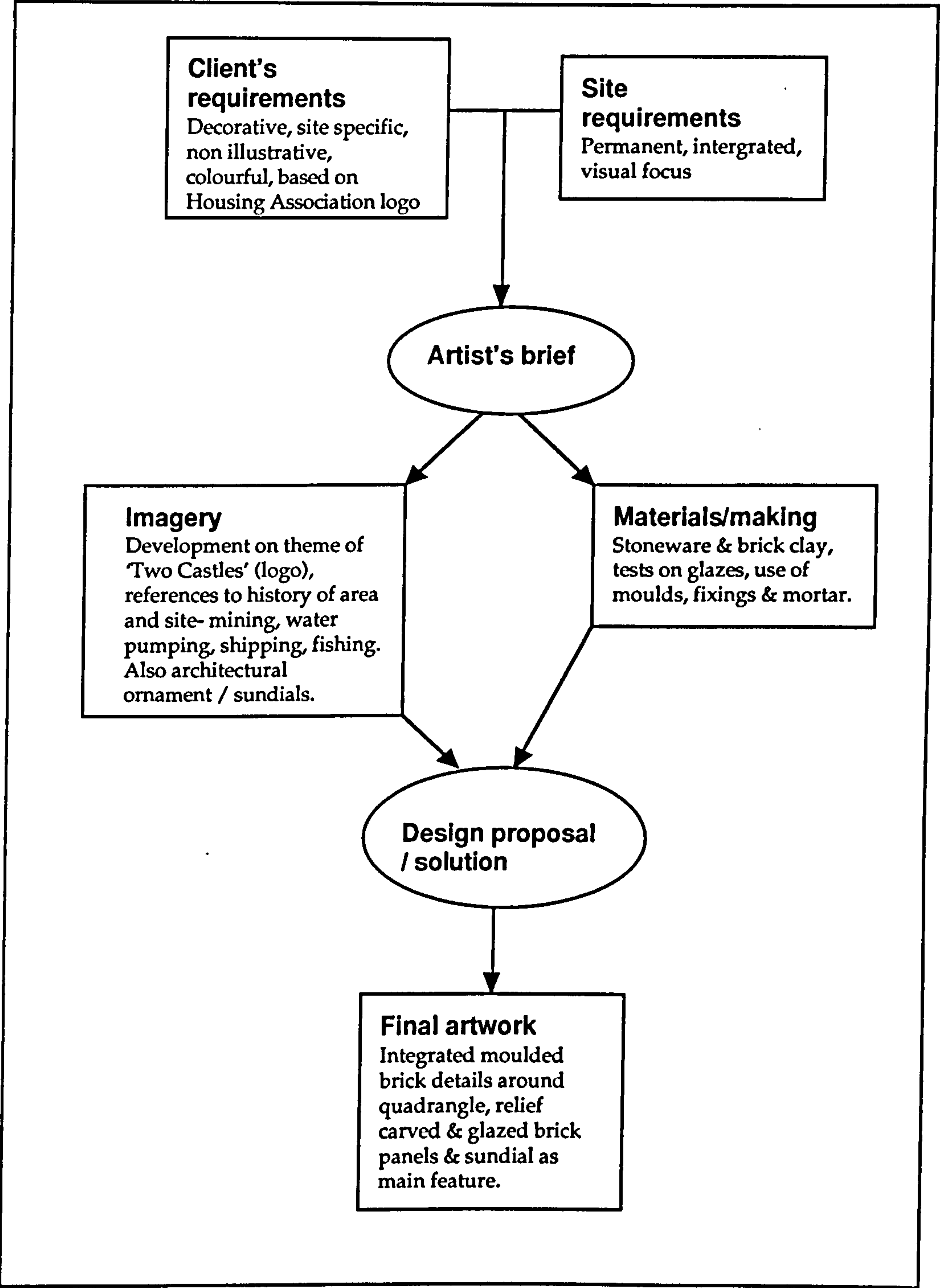
3.5.3 ARTIST'S RESPONSE TO THE BRIEF

3.5.3.1 Sources of imagery/ initial ideas

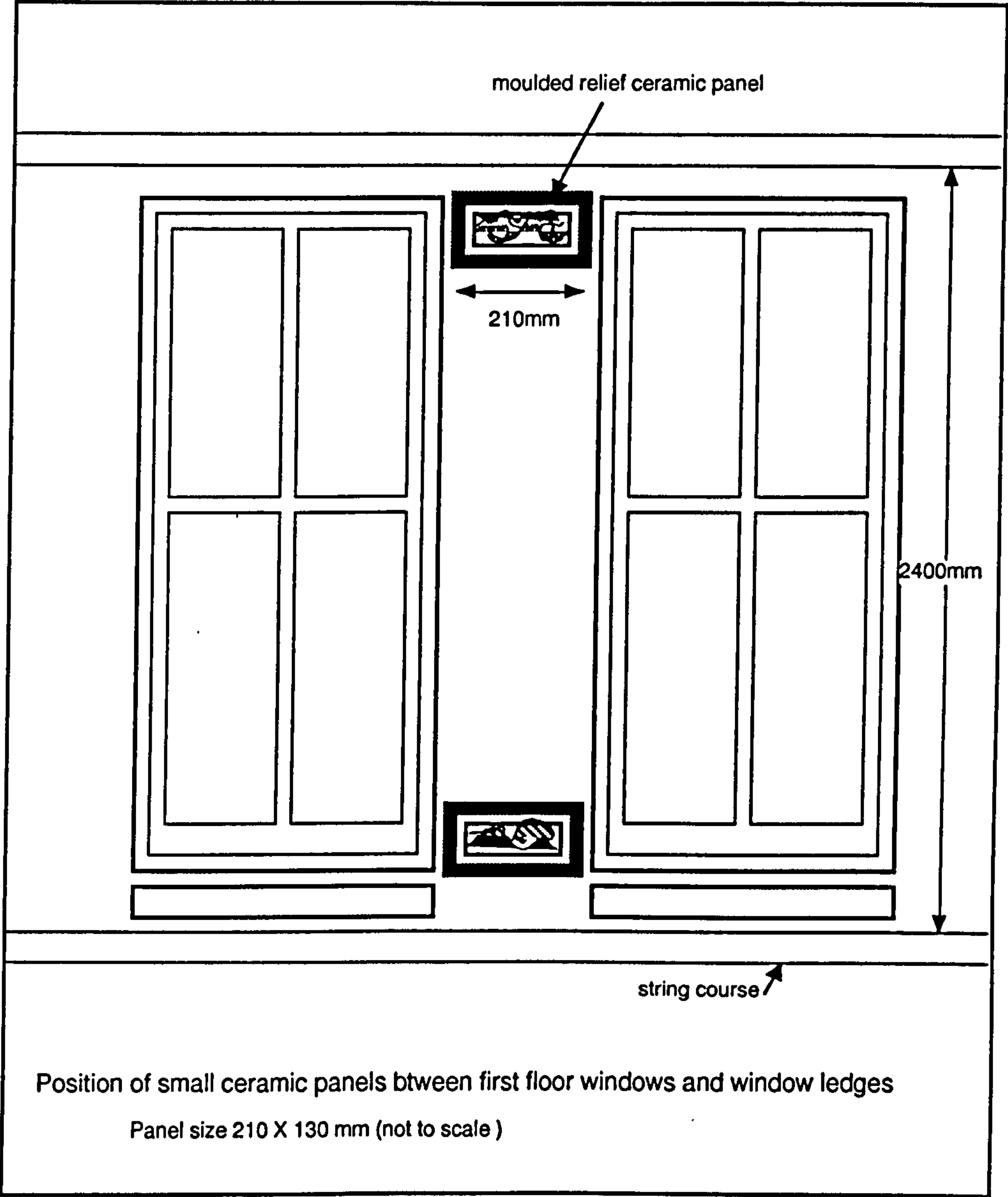
There were several sources from which imagery and ideas were drawn, the aim being to use a combination of references at first in order to establish a range of ideas appropriate to the site to work from.

The sheltered housing scheme was sited on land reclaimed from a de-commissioned colliery in what was originally a pit village just outside Sunderland. In terms of imagery, therefore, references to the now non-existent mining industry and to the sea had obvious possibilities for designs. However, one specification in the artists brief was that the imagery should not be "standard representations of the North East with references to miners and ship builders". It was important, therefore, to devise a way to incorporate such strong links with the site's past without producing images that could be construed as conventional and boring.

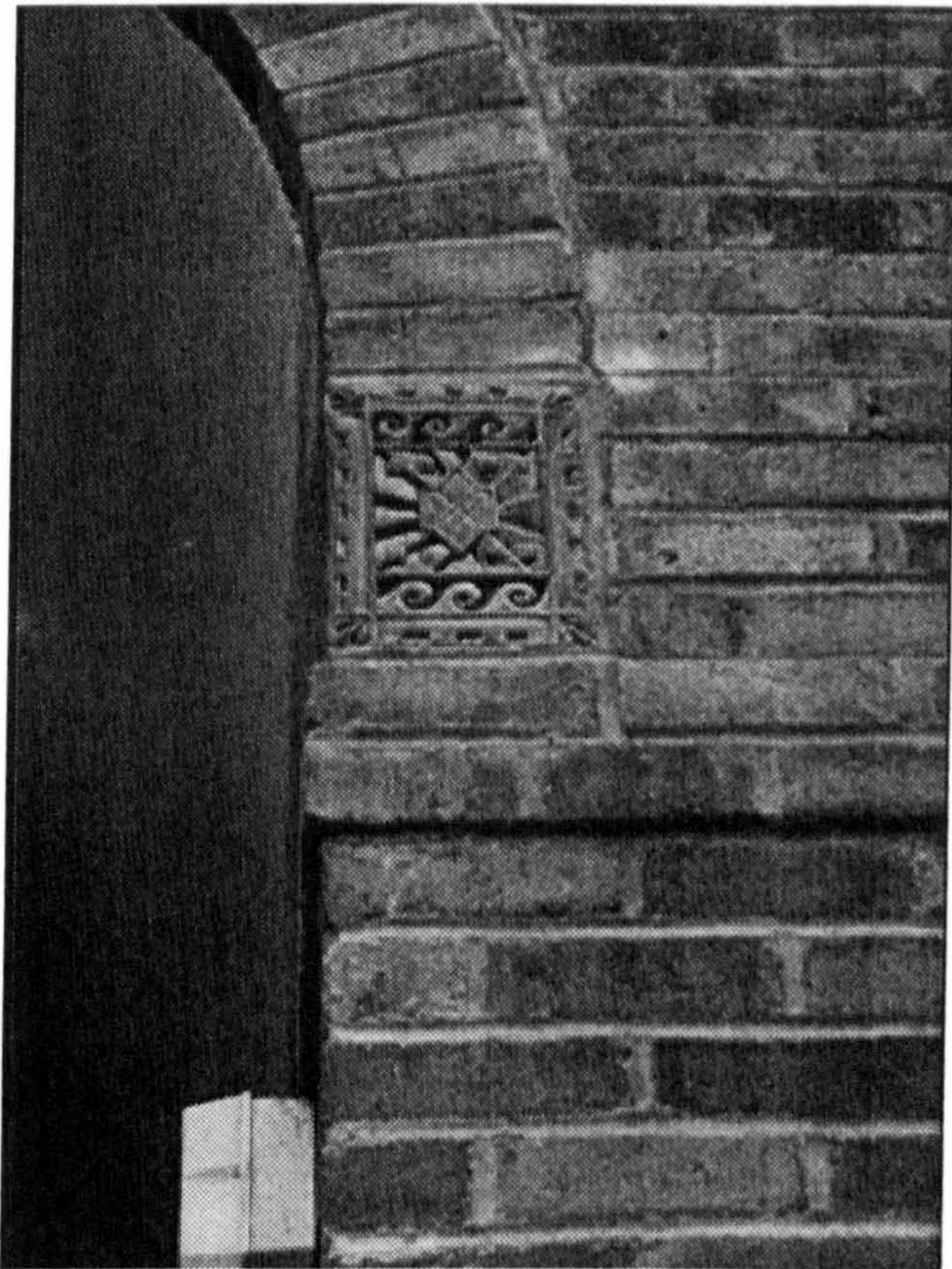
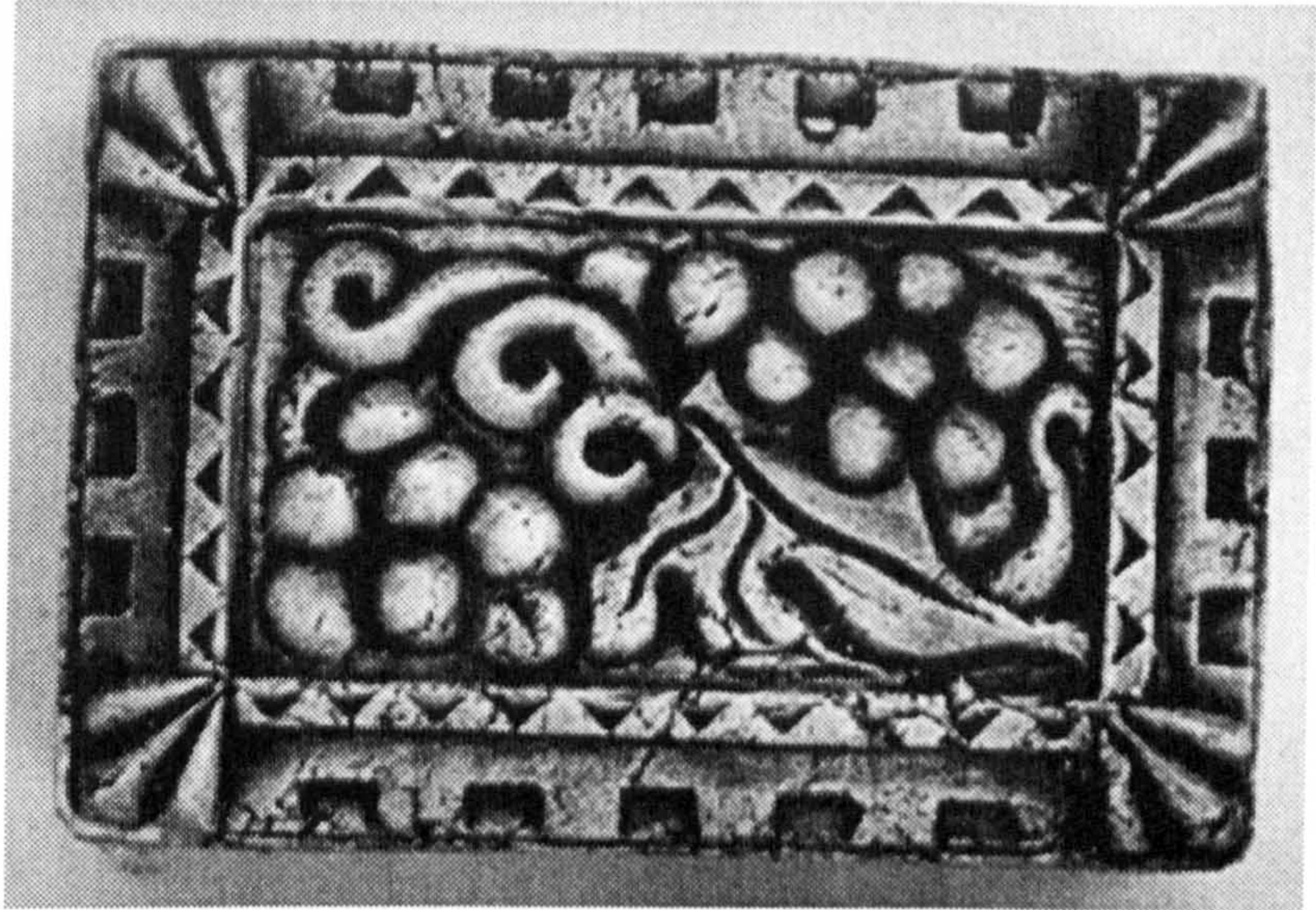
It had been one of the clients' requests that the imagery should be decorative or abstract rather than representational and that it should in somehow incorporate the logo of the housing association. This was made up of two silhouettes of stylised castles with the space between them forming a diamond shape. This initially seemed extremely limiting artistically, but became the starting point for designing the small brick details and elements of the main feature. In varying the positive and negative elements in different compositions, it was possible to arrive at a surprising number of ornate castellated patterns



Development of Artist's brief and design process



Elevation showing the position of the small moulded ceramic panels



Details of small moulded panels

suitable for multiple castings. These stylised patterns combined with themes related to the area (sea, industry, agriculture, glass, an old water pumping station) formed the basis for the designs on the small brick details.

Ideas for the main doorway came from looking at the type of ornament associated with ornamental entrances, which is a major source of imagery generally (see Section 1.2), and also that associated with sundials, the most usual being the sun, moon and stars and astrological symbols.

3.5.3.2 Development of designs

Taking photographs of doorways, entrances and sundials as a starting point, initial drawings were developed combining different ways of introducing elements of the logo or historical and sea themes into the proportions of the archway as indicated on the architects plans. Using photocopies it was possible to obtain multiple images which could be composed into new shapes and images to be superimposed on the site plans.

It was necessary to draw up detailed drawings to scale to allow the architect to see how the work might look in situ and to make suggestions regarding colour and proportion and the exact positioning of the smaller details, whether between windows, string courses under the eaves or in the paving. These drawings were superimposed onto the architects' plans and submitted to the clients for approval. The architects, however, were quite happy about the work developing somewhat through the making process.

3.5.3.3 Artist's proposal

The proposal was for the main doorway to contain the sun and moon and to have elements referring to water and derived from the housing association's logo. The pane above the archway would incorporate a sundial with the sun and moon faces positioned corresponding to the rising and setting position of the sun on the sundial.

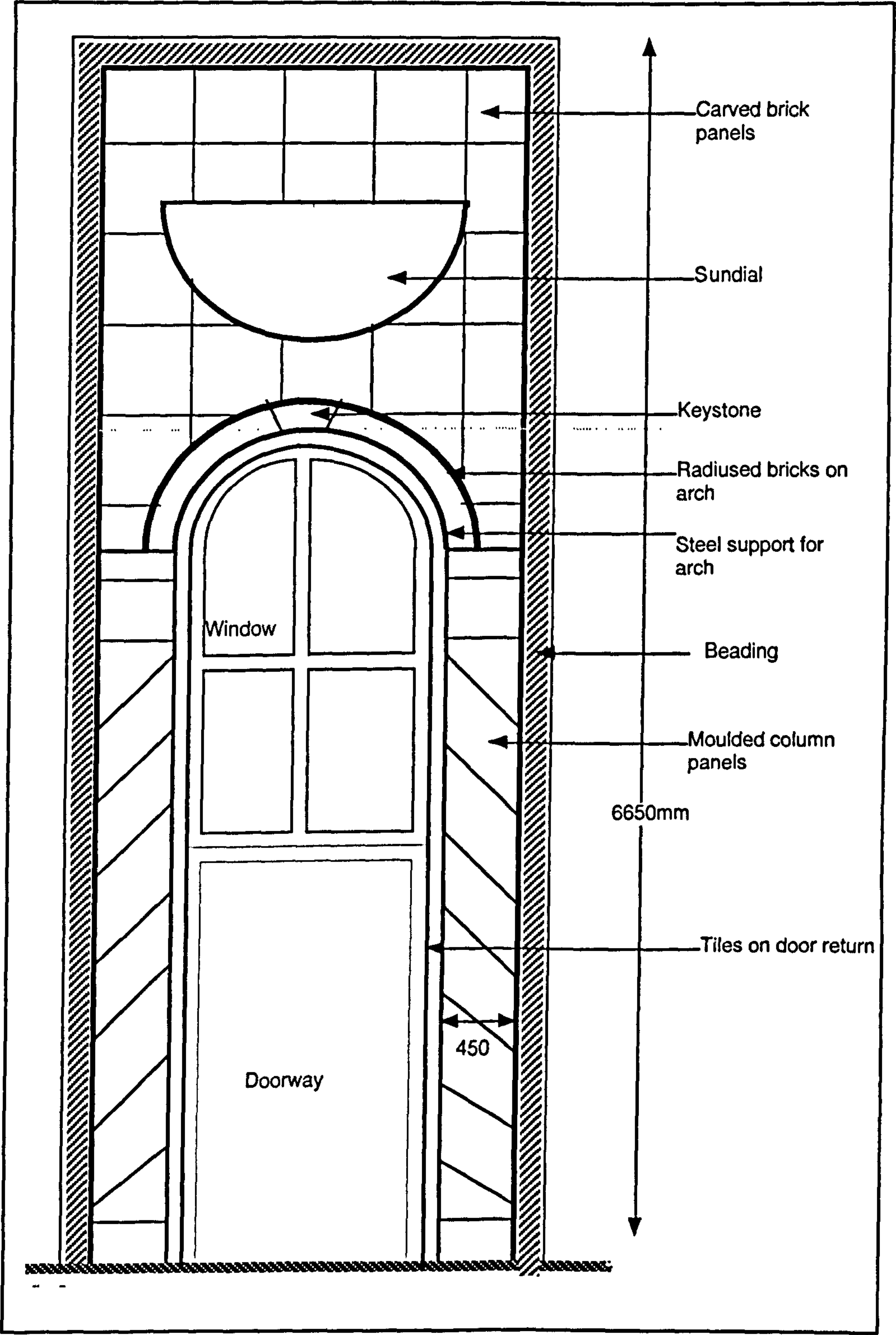
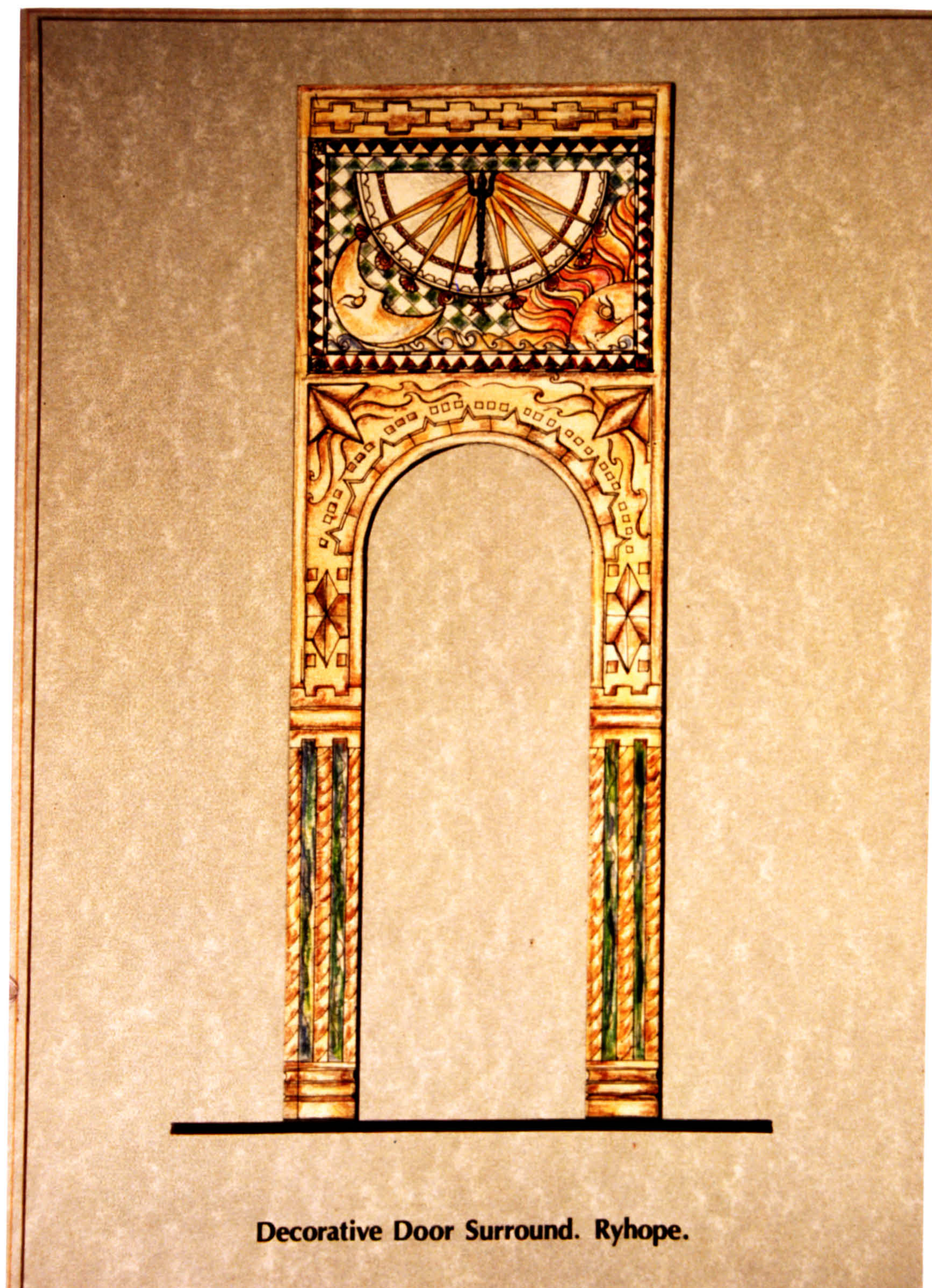


Diagram showing layout of doorway and position of panels



Decorative Door Surround. Ryhope.

Drawing of proposed doorway

**The pointer that casts
the shadow to mark the
time*

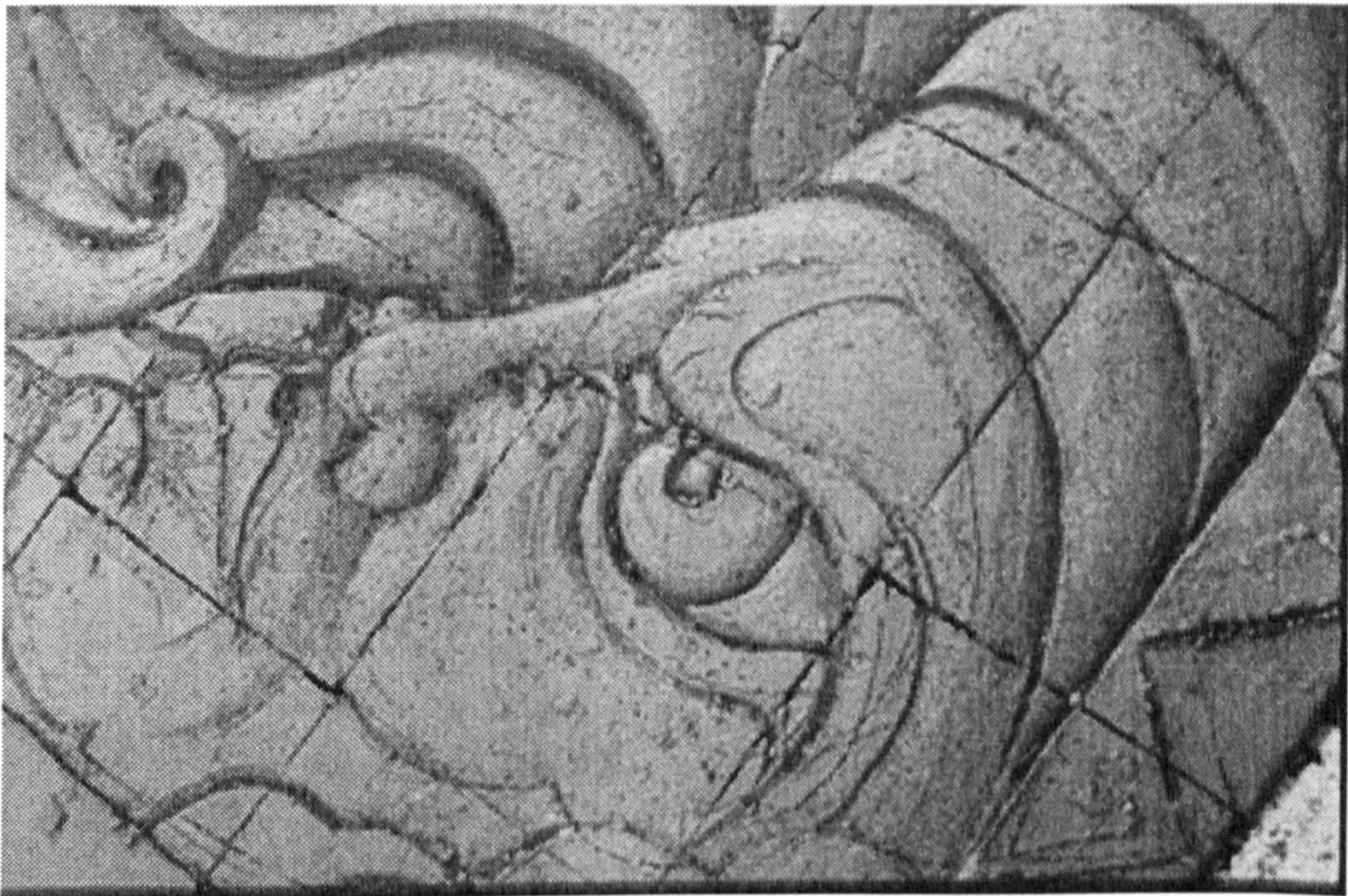
The main feature was to be carved in oversized brick blocks, using iron oxide to highlight the relief carving. The sundial was to contain symbols relating to the position of the building overlooking the sea. After consultation with the architect it was decided that this section would be made by a final year Design student specialising in metalwork. The final proposal for the sundial incorporated the rays of the sun and used a sea horse as the gnomon*.

The small brick panels to be situated along the string courses were made as a series of five different designs relating to the history of the area, boats, sea, fish, industry and farming. One other design was proposed for the springing of the main entrance archway, a stylised development on the company logo, modelled in relief.

3.5.3.4 Materials and making methods

The main doorway was made out of carved brick panels three times the size of a standard brick. This was the most appropriate medium from the point of view of durability, and visually fitting in with a brick building, and the best way to produce a large bold design which could be easily dismantled and reassembled.

The main part of the doorway was firstly laid out on the workshop floor with the arch calculated using a hardboard template. The design was drawn freehand (although referring to design drawings) onto the wet brick and roughly carved out. The designs were then refined and smoothed using finer tools. A first attempt at making this section was made of handmade bricks from reclaimed brick clay, but these exploded in the firing being too thick and containing air. The piece was remade using extruded blocks provided by a local brick company; in tests some of these exploded, again revealing that the blocks were too thick, not allowing even drying and the carbon to burn out in firing. The firing schedule had to be altered, and the bricks hollowed out to promote drying and efficient firing.

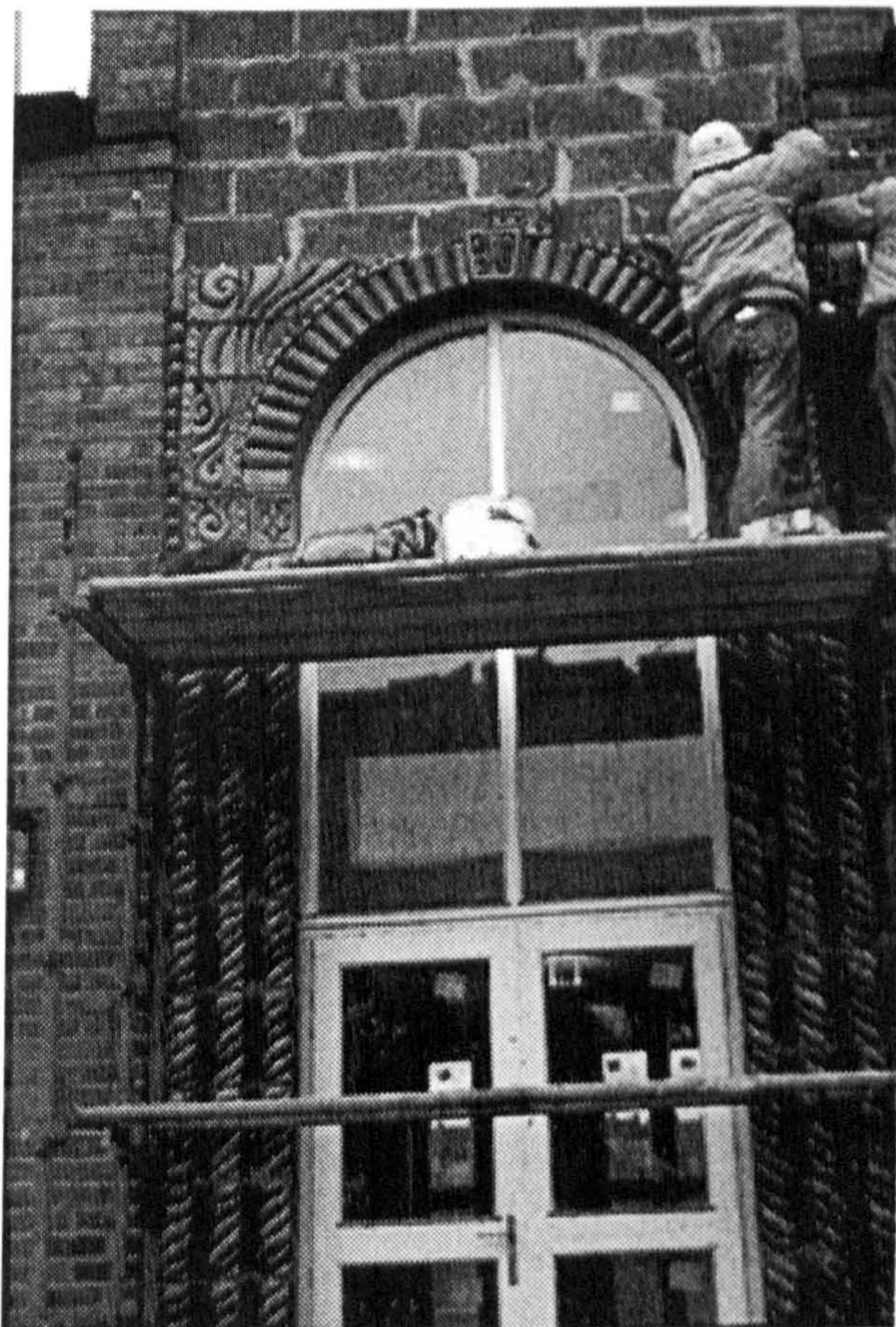


Details of carved panels

The **columns** on either side of the doorway were modelled in terracotta and then cast in plaster to produce repeating designs based on water. The **small panels** were approximately the size of two standard bricks, and five designs were modelled and cast in order to produce multiples. These were made from stoneware clay, using iron oxide to highlight the texture and pattern. They were glazed using a shiny stoneware glaze in blues, greens and honey colours.

It was not the intention at the outset to glaze the doorway, but the fired colour was a very dull buff which lost the definition of the carving and so it was decided to use glaze to enhance the relief carving. Tests were carried out using earthenware glazes, similar to those that were used in Victorian faience, coloured using iron, cobalt, copper and manganese. This resulted in rich deep turquoises, purples, greens and golds which seemed very bright in the workshop but on the large scale in situ the piece

Installation of the doorway



reflected tones in the surrounding brickwork and did not look out of place. As a final detail beading was made to frame the piece along with tiles to line the inside return of the archway.

The doorway and moulded bricks were installed as the building was nearing completion by the site brick layers. The Brick panels had to be individually screwed into the wall using wall ties as they were too heavy to be simply mortared into place.

3.5.4 Summary

- **Site:** New sheltered housing scheme
- **Funding:** Incorporated into the materials budget, supplemented by sponsorship
- **Participants:** Client (Housing association), artist, architect
- **Artist's response:** Decorative relief panels and repeated details integrated into the building
- **Imagery:** Historical architectural references, related to Housing association, (site-specific)
- **Materials:** Carved & glazed brick panels, moulded & glazed stoneware details.



The finished Doorway and sundial in place

SECTION 4: ANALYSIS OF THE CASE STUDIES

4.1 INTRODUCTION

The aim of the section is to analyse the key points arising from the completion of the site-specific work in the four case studies. This establishes common factors and differences relating to the commissioning process, collaboration and the approach to the design and production of large scale site-specific ceramic work in each of the projects .

One of the most difficult aspects in analysing the case studies was finding an appropriate way to appraise and evaluate the work critically and objectively. It was relatively easy for the artist/researcher to criticise the finished work, but much of this criticism tends to be negative and subjective as the artist looks forward to the next project. The approach taken has been one of reflection, comparing and contrasting the key aspects and processes in the Case Studies, to establish from an artist's perspective the most successful approach to site-specific art commissions.

The emphasis of the research has been on the investigation of the practice of producing site-specific ceramic features within the contemporary commissioning process. Whilst some reference is made to comments from key participants, given as an immediate response to the commission, it was not considered relevant to the focus of the research to undertake an extensive survey of responses to the completed work. Instead the focus of the analysis has been on the collaborative process and the artist/researcher's practice of applying decorative ceramic work within public art commissions.

Although each Case Study had different aims and character, several constant variables were used for analysis and comparison (these correspond with the stages detailed in the case studies in section 3.2):

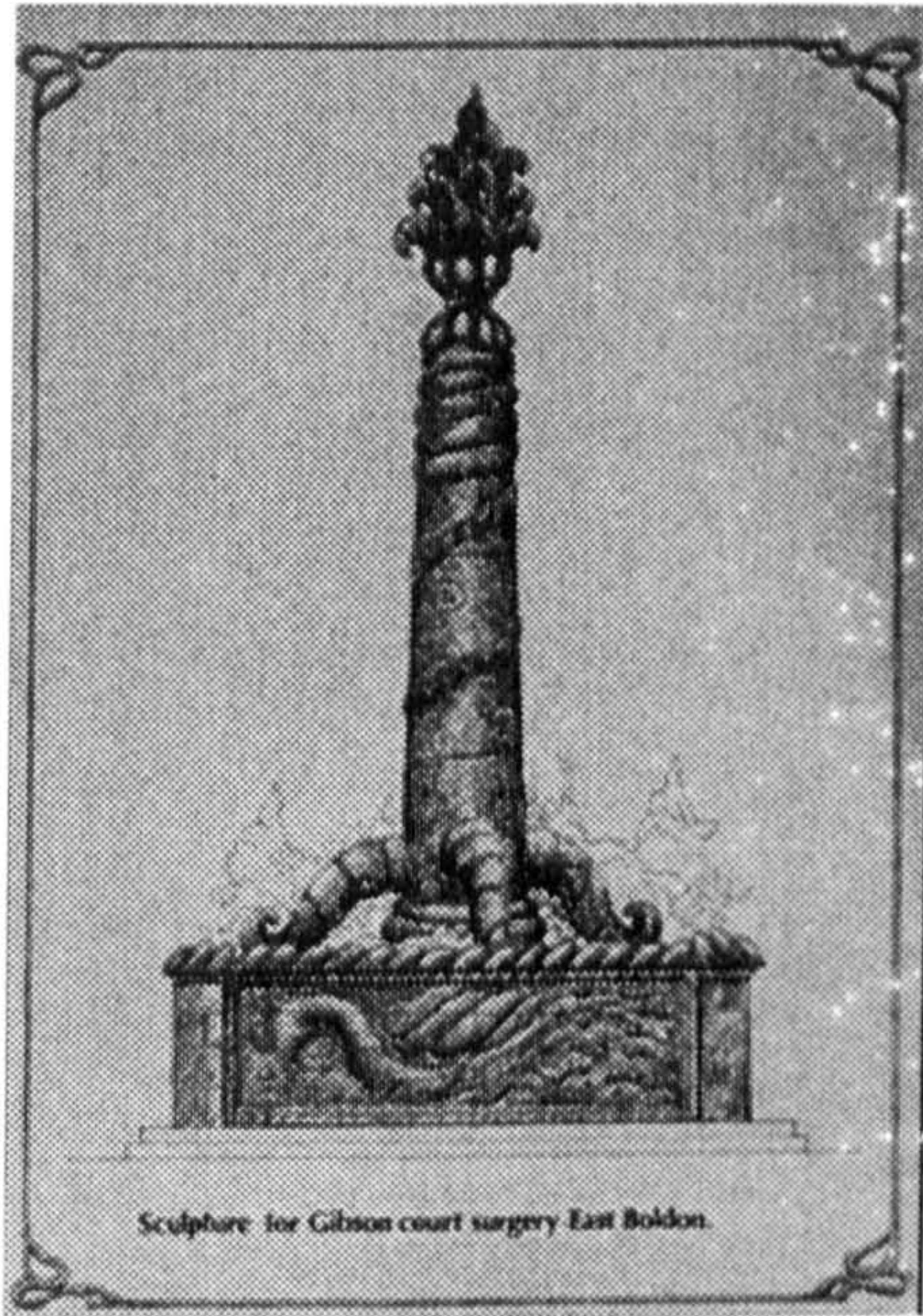
- funding and contractual details
- collaboration- the roles of the artist, architect and client
- the role and nature of the artwork
- materials, making and installation
- responses to the commission

Each case study has been examined sequentially followed by a summary of these preliminary analyses. Points arising from these analyses have then been used to form the basis of a cross-case comparison.

The constant factor in all the case studies was the artist, with other parties becoming involved in the project at different stages of the commissions. For the purposes of this analysis and comparison of the case studies, only the roles of the key participants and their relationships with the artist have been examined in detail - Architect, Arts Officer and Client; from these, it was possible to draw conclusions regarding the nature of the collaboration and roles within it. There were, however, other people involved in the commissions, such as building contractors and other specialists (e.g. specialist suppliers, brick manufacturers, metalsmiths) who had an important part to play in the successful completion of the work and are included where relevant to the analysis.

4.2 ANALYSIS OF EACH CASE STUDY

4.2.1 CASE STUDY 1: “Tree of Life”



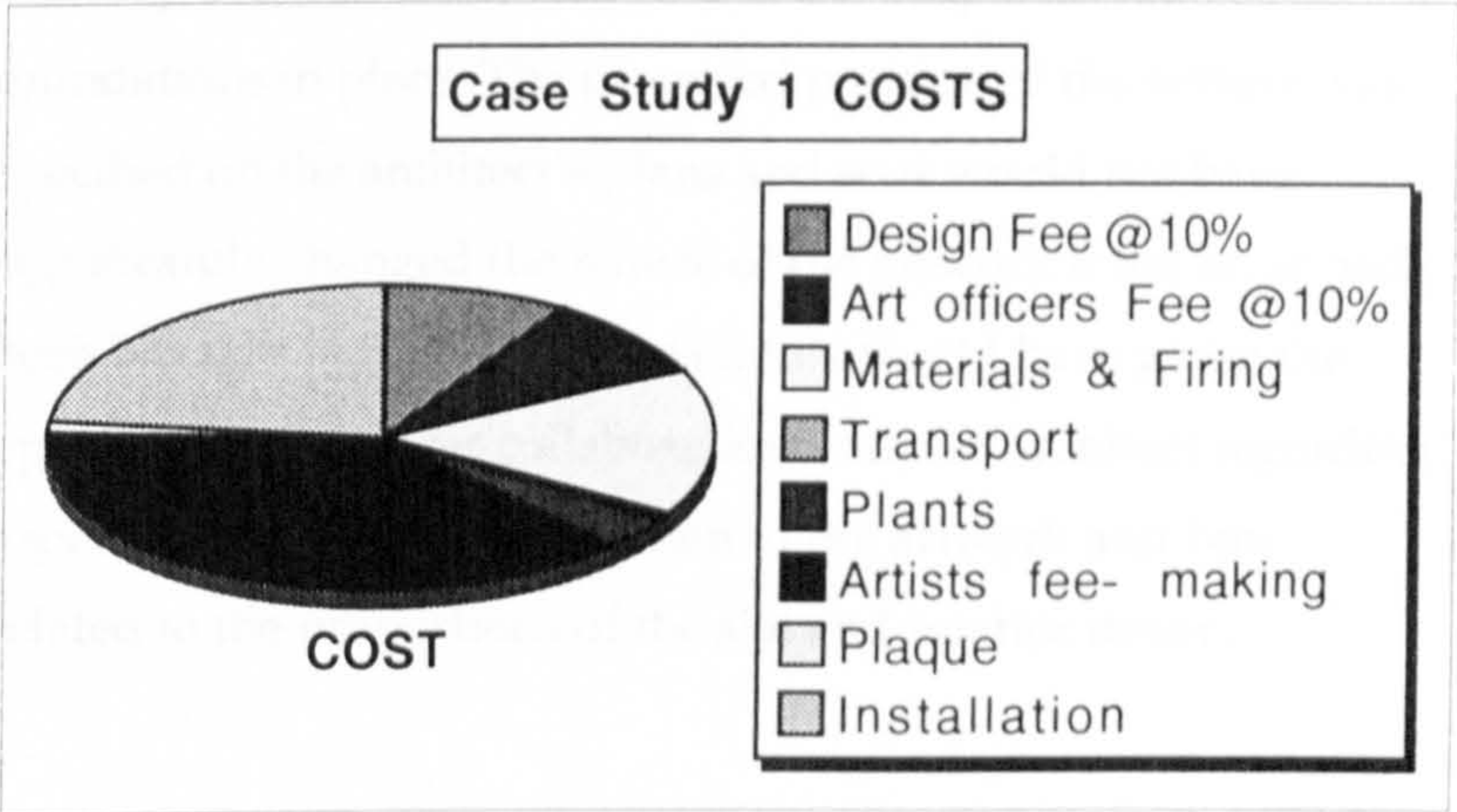
This was the first large scale public commission to be undertaken by the artist/researcher and as such some problems did occur due to lack of previous experience in this field. In relation to the research project, the case study became an important test of the ability of the artist/researcher, both to produce a large work within a time scale and budget, and to collaborate with and communicate ideas to a client and a range of other professionals. The sculpture was the first piece of work made by the artist/researcher using carved brick or ceramic on such a large

scale, and involved learning about the material as the commission progressed. In many ways this commission set a precedent for future work.

4.2.1.1 Funding and Contractual details

The use of the “Percent for Art” scheme benefited the artist by identifying a set amount of money specifically for artwork rather than the fee having to be negotiated or bid for at the start. Out of this a set fee of 10% was allocated to the Arts Officer with a further 10% for the artist’s design fee. The remaining amount was to incorporate making, clay, glazes, firing costs etc. The cost of installation was negotiated at a site meeting with quantity surveyor arriving at a figure which was significantly larger than had been estimated by the artist for a ‘specialist’ brick layer. This took the project over budget to which the client reluctantly agreed. There was no formal contract defining exactly what the

artist was required to produce and ultimately who was responsible for payment, including legal requirements regarding damage, injury and maintenance during and after installation. Details of costs, insurance and time scale were agreed in correspondence between the architects, Arts Officer and artist prior to the start of the work.



It was decided at the site meeting that the artist should be a “*nominated sub-contractor*” rather than being directly responsible to the clients or to the architect. This appeared at first to be a satisfactory arrangement as it legitimised the artists position in the eyes of the contractors who were concerned that the installation of an artwork would interfere with their schedule. It turned out, however, to be a mistake as it allowed the contractors to control the budget (enabling them to overprice the installation) and prevented the employment of an outside bricklayer to install the work.

The main problem arising from this arrangement was that the artist could not be paid for materials in stages throughout the commission, because all subcontractors were paid up to six months after the completion of the building contract and the architect’s inspection. Although the commission fee itself was

adequate, it would have been virtually impossible for an artist to undertake or complete a commission in this way without having another source of funding for materials, equipment, etc.

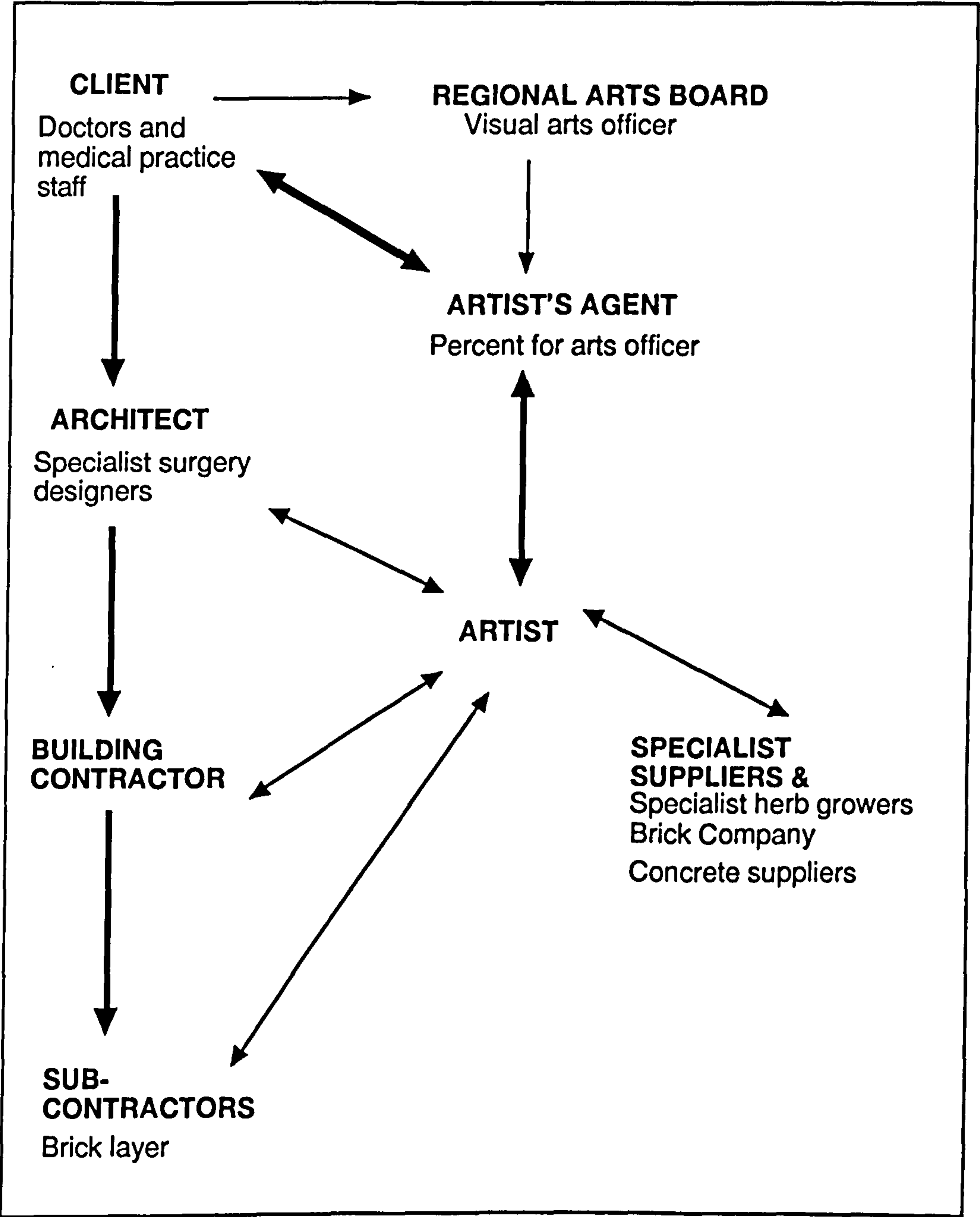
4.2.1.2 Time scale

By the time the artist/researcher was introduced into the building programme it was well under way with the foundations in place. The proposed position of the feature was specified on the architect's plans and so it would not have significantly changed the nature of the artwork if the artist had been brought in earlier. However, this would have given the opportunity for closer collaboration with the architect regarding aspects of design and installation of the artwork and how related to the proportions of the site and interior decor .

4.2.1.3 Collaboration- roles of participants

There were two main stages involved in this project: the first, involving the client, Arts Officer and artist which could be termed the 'planning / design stage'; and the second involving the architect, contractor and artist- the 'finishing and installation stage'. There was a period whilst the piece was being made during which there was very little contact between the artist and anyone else.

The client had a crucial role as the instigator of the whole project and sustaining an interest in commissioning a site-specific work. One doctor in particular maintained close links with the artist throughout the duration of the contract, relaying information back to the other partners and involving the artist in site meetings.



Roles and relationships between the participants

The Public Arts Officer was closely involved at the start in helping to initiate the project and as a mediator between the client, architect and artist. Once the designs had been approved and the project was under way, this input lessened, leaving the artist to make direct contact with the client, architect and contractor. One of the arts officer's most important roles was in helping to organise the formal aspects of negotiation with client and architect and strengthening the position of the artist.

The architect had very little contact with the project which may have been due to the distance involved between the practice base and the site, but in general the project architect appeared to have little interest in the commission once the plans had been modified whilst arrangements for installation and payment were delegated to the contractor.

The contractors (site foreman, manager, quantity surveyor) gave the impression that the artwork was unimportant and that the artist would interrupt the building schedule. However, when the work was delivered to site for installation the contractors were not ready and had not ordered concrete or contacted a bricklayer for the job.

Other people became involved with the project as it progressed. Both the brick company and the specialist herb growers were extremely helpful and interested, providing materials and expertise. The herb specialists took a great deal of time designing the planting in patterns and complementary colours as well as suggesting suitable plants on the basis of being nonpoisonous, fragrant and decorative.

It was important, as this was a first commission, that the client and Arts Officer were so enthusiastic and supportive throughout the project. There is no doubt that closer collaboration with both architect and contractor would have produced a better result, certainly with regard to installation.

4.2.1.4 Nature and role of the artwork

The finished artwork took the form of a four sided brick structure designed to contain plants and incorporating carved brick designs in low relief derived from the Four Elements. A central freestanding ceramic structure was designed to represent the tree of life. The piece fulfilled the design brief, however the overall effect of the work was greatly reduced by shoddy installation with one of the primary functions, as a planted feature, destroyed by the plants dying.

4.2.1.5 Materials, making and installation

The choice of brick for the main planted part of the sculpture proved to be appropriate from a functional viewpoint and as a vehicle for the imagery, with the deep red colour accentuating the relief carving enabling the images to be visible from the reception area.

The making methods influenced the form of the piece, with an intended contrast between the structural form of the brick base and the more organic hand built 'tree'. Brick carving and hand-building from coils are themselves opposite approaches to working with clay, one involving building up material and the other carving it away. In hindsight the base was not precise enough whilst the tree was too static. This was due largely to the artist/researchers lack of confidence and experience of working with ceramic on a large scale and in brick carving. It is possible

that the use of moulds would have been more appropriate for making the tree as this would have enabled an organic form to have been made, whilst retaining a greater degree of control and precision.

The bricklayer had never installed decorative or carved brickwork before and it became apparent during the installation that he had no real understanding of what was required. This was due in part to the artist/researcher's lack of knowledge about bricks and bonding but also to poor communication informing the bricklayer of what the job entailed. The brickwork and joints in the 'tree' had to be *re pointed* with red mortar at a later date to conceal the original grey mortar and the whole work cleaned.

The designs specified that the containing walls should be lined with a commercial pond liner and filled with three graduated layers of gravel topped with a level of compost and 'pea gravel' to facilitate drainage. When the herb suppliers arrived to plant the sculpture, it was discovered that the contractors had painted bitumen inside the walls instead of lining them and had filled them with 'hard core' both of which killed the plants within three weeks.

4.2.1.6 Responses to the commission

From the perspective of the artist/researcher, as the maker, the overall effect of the piece on approaching the consulting rooms was that the sculpture, once installed and planted looked appropriate in the space, although it had been difficult to visualise the proportions relative to the site in the making stage.

The sculpture was well received by the medical and nursing staff, despite the problems with the plants dying (they have since been replaced through donation of pot plants by the patients and staff).

The users of the medical centre did not fully understand the piece, how it had been made and what the imagery signified, so the artist/researcher was requested to produce a plaque that would explain the making process and the sources of imagery. This took the form of a framed montage of photographs, drawings and texts sited the wall next to the sculpture and was particularly well received by the medical centre staff.

There was no direct response from the architect on completion of the work, although the project architect (on a site visit during installation) expressed an interest in the way the bricks had been carved (in particular the coping) and how the material could be used as a means to economically introduce art into buildings.

The Percent for Arts Officer was in a position to view the project in relation to other public art commissions, and felt that the artist should have been consulted more on the interior setting for the work, in terms of colour and lighting, and to have been brought in to the project at an earlier stage. The flooring installed was bright orange imitation cork linoleum tiles with the surrounding woodwork stained mahogany, both clashing with the colour of the brick.

The 'tree' was glazed using green and blue stonelike colours which initially seemed rather uniform although as an overall effect, it contrasted well with the red brick and the plants. There were areas of texture in the clay work which visually broke up the surface and contributed to a visual interest.

Details, such as the mortar joints being too wide and visually dominant, and the plants dying, diminished the quality and success of the work although many problems could have been avoided with more experience and confidence on the part of the artist; the plants being killed by the bitumen and lime gravel may have been avoided if there had been better communication with the architect.

4.2.1.7 Summary of analysis

- The choice of brick was very appropriate for a piece that was designed to be both decorative and functional.
- Many of the problems encountered could have been avoided with more previous experience and more assertiveness on the part of the artist.
- The imagery was the result of slight compromise, as many people contributed suggestions; however, this would be less likely to happen with experience and confidence on the part of the artist.
- An opportunity for the users of the surgery to make suggestions or to view proposals may have helped inform them about the artwork.
- Closer links with the architect would have ensured that the work was installed properly and that the contractors followed design specifications rather than trying to cut costs.
- It would have legitimised the artist's position within the building contract if the artist had been brought in at an earlier stage in the programme.
- Defining the artist as a sub-contractor was not appropriate for this commission as it did not guarantee payment to the artist in stages.
- 'Percent for Art' was important as a means of identifying a proper budget for the artwork at the start but did not prevent the money being withheld by the contracting company.
- The Percent for art Officer was needed to implement the funding policy and to liaise between client and artist.

4.2.2 CASE STUDY 2: “The Elms -Tree Walls”

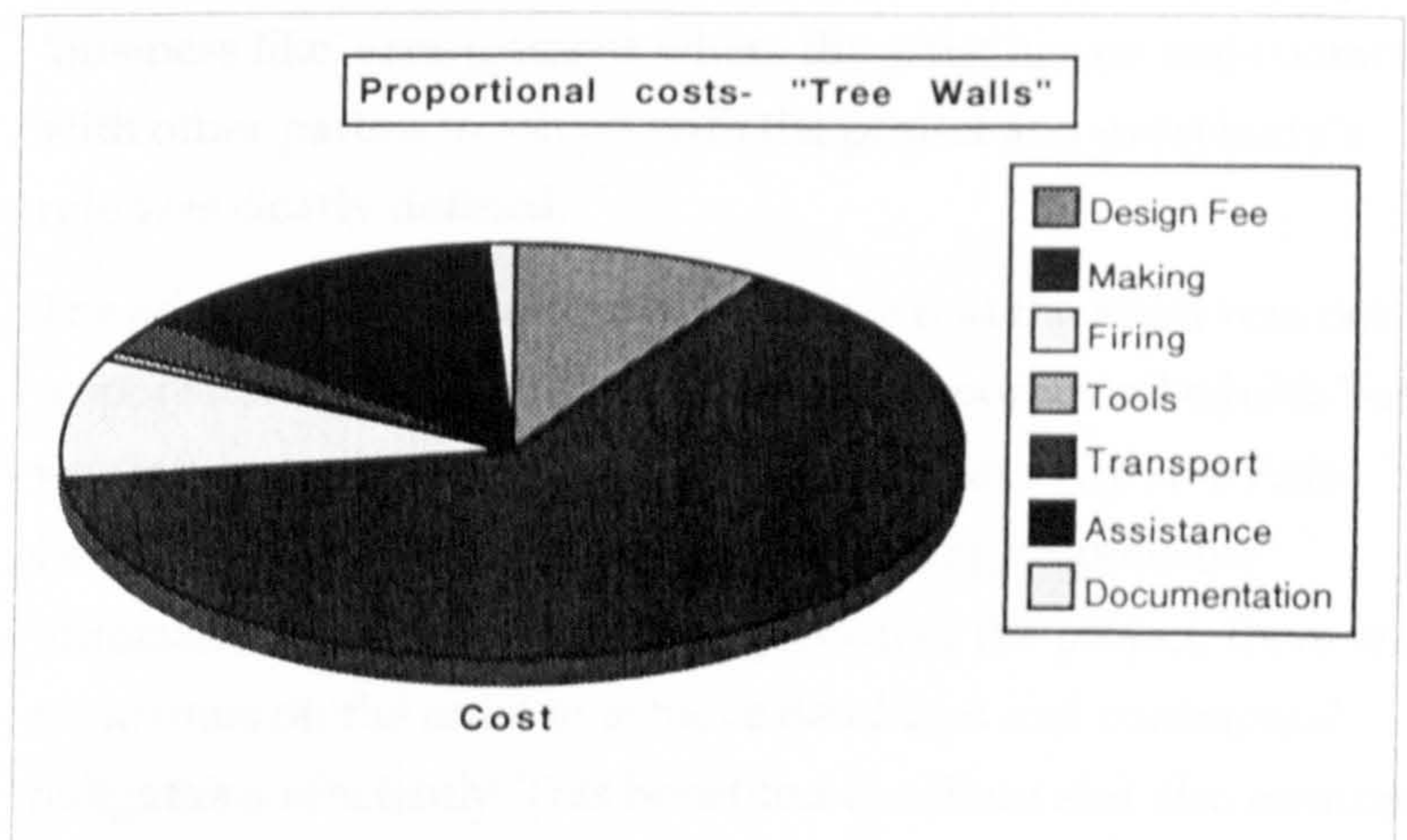
4.2.2.1 Introduction



This project was initiated as a result of a regional Public Arts Officer seeing the artwork completed as part of the previous commission. This typifies the way in which artists are often directly commissioned on the strength of previous work, rather than through limited or open competition.

4.2.2.2 Funding and contractual details

The allocated budget would be considered extremely low if it were not for the fact that firing, installation and transport costs were excluded and materials were provided as sponsorship from a local brick manufacturer. Without this kind of support it would be unlikely that the fee would have covered the cost of production.



There was no formal written contract drawn up, but as the project was managed by a Public Arts Officer, there were no problems arising from a verbal agreement. The client

represented a large national building society which paid the artist directly on receipt of an invoice at the completion of the project. This was suitable for a short time scale project but on a longer contract problems would have arisen, as the artist could not be paid in stages for materials, etc.

4.2.2.3 Timescale

The short duration of the commission was the greatest problem, leaving insufficient time for design and discussion of imagery, or the possible introduction of colour and variety into the work, resulting in a compromised design. There was pressure to complete the work within ten weeks in order that the site bricklayers could install the walls before the end of the main contract: this gave the impression that neither the client or the Public Arts Officer had a realistic knowledge of the time involved in drying and firing ceramic, and surprisingly there were no losses during firing.

4.2.2.4 Collaboration

The Public Arts Officer was the central figure in the commission linking the client with the artist. This was a very 'business like' arrangement where the artist has no real contact with other parties involved with the project and everybody's role was clearly defined.

The advantage of this arrangement was that the artist was not responsible for organising meetings, transport or schedules but was left instead to design and make the work. With the Arts Officer making the arrangements, and being responsible ultimately for the successful completion of the project, there was more onus on the artist to achieve deadlines and contractual obligations efficiently. This benefited the client and also ensured that the payment was made on time at the end of the commission.

The disadvantages of the arrangement were that it made the project more impersonal, as the artist had no direct contact with either the client or the residents in discussing the imagery and nature of the artwork. This also decreased the sense of control that the artist had over negotiations, schedules and the contract.

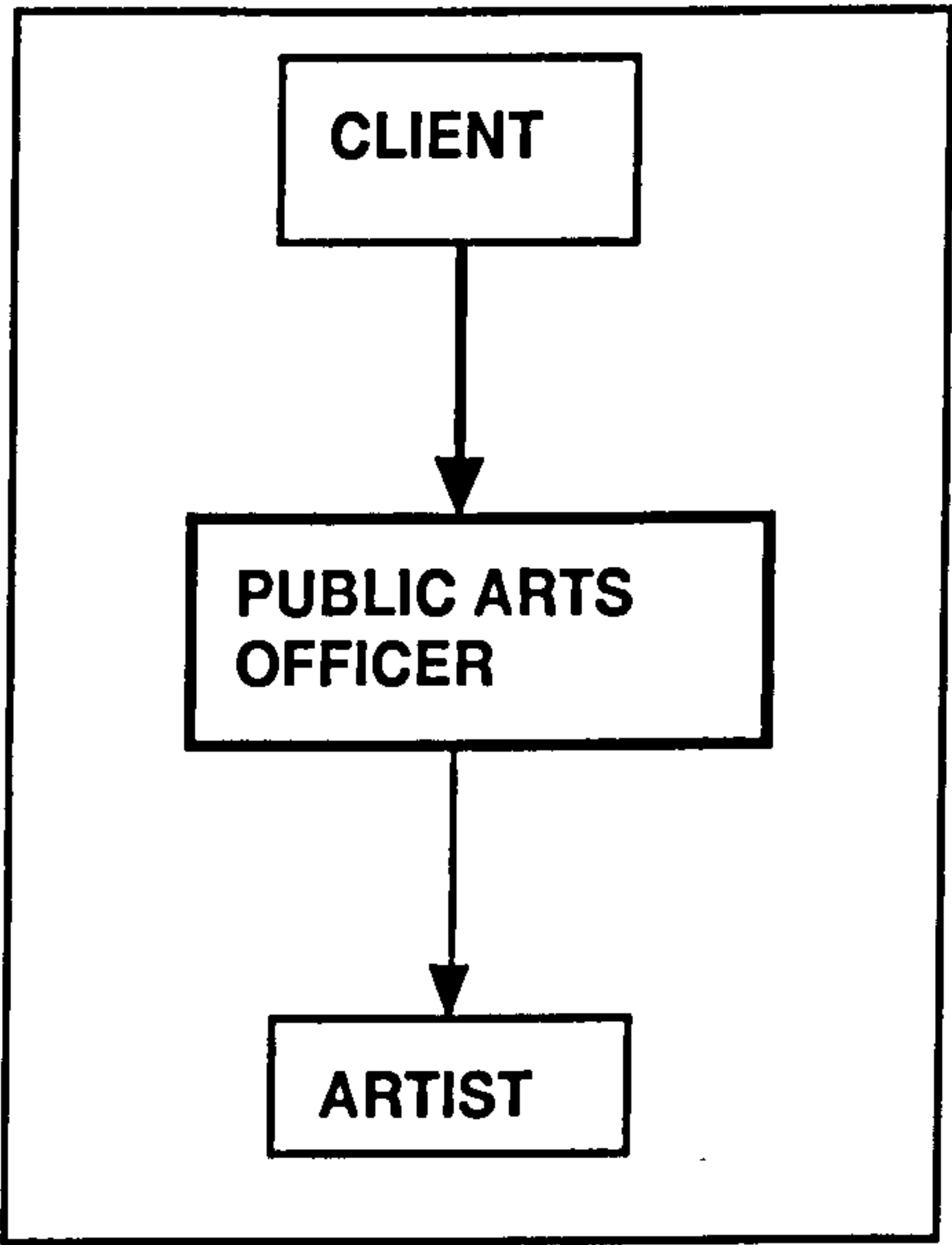


Diagram showing the simple nature of the relationship between participants

There was the definite sense that the client wanted as few problems as possible with the commissioning and “off the shelf” as an afterthought to fill some unused spaces. However it showed the client’s consideration and interest in choosing to use the remainder of a budget for art, rather than something else, and a concern for environmental details that would enhance the housing development for the residents. There was no contact with the architect, as the sites were separate from the houses; however it might have been interesting to have had a greater degree of collaboration

earlier in the contract, perhaps by introducing small details into the houses themselves reflecting the themes in the walls.

4.2.2.5 Materials, making and installation

Rather than the brick panels being carved according to a standard brick bond, they were carved ‘end on’.

Although this ensured that the largest face of the brick was visible and minimised the visual interruption by mortar joints, this made it more difficult for the finished panels to be incorporated into the wall structure. As the walls were double, the panels did not fit exactly with the standard brick bond at the corners, necessitating the use of half and three quarter bricks to fill in gaps.

**Efflorescence white or green bloom on new brickwork cause by soluble salts rising to the surface of the brick; disappears in time*

The brick was buff when fired which did not give as much definition to the carving as red brick might, (although the images changed slightly at different times of the day depending on the position of the sun).

The mortar joints at first seemed very obvious, being darker grey than the brick, and visually broke up the images when viewed close up, but over time, the brick has weathered to a darker colour. There was a slight green efflorescence* shortly after the walls were built which, although technically a fault, helped to 'age' the walls making them less obviously new and also helping to merge the brick and mortar joints.

There was a slight discrepancy in the colour of the bricks as the kiln fired ten degrees hotter at the top than at the bottom (as the bricks were so tightly packed the heat could not circulate efficiently). This could potentially have been a problem as some of the under fired bricks may have been too porous weakening the walls. This was prevented by the panels being backed by a second wall whilst any colour difference was virtually unnoticeable.

4.2.2.6 Responses to the commission

The client was happy with the result, and enthusiastic about the use of brick to introduce ornamental details into public areas that might not normally have such details due to the levels of vandalism. The material suited the requirements in being both functional and decorative. Rather than being disappointed in the buff colour, he felt that it reiterated details in the houses such as lintels, and window sills which were a similar colour (although a different material "cast stone"). It had been intended that there would be planting around the walls, but this was not possible due to a complication in funding involving the local council. In general, it was felt that retaining the elm trees on the site and details such as the carved walls did much to enhance the

would be planting around the walls, but this was not possible due to a complication in funding involving the local council. In general, it was felt that retaining the elm trees on the site and details such as the carved walls did much to enhance the appearance and quality of such a housing development, and the client would be willing to undertake such a project again, should money become available.

The Public Arts Officer felt equally that the project had been worthwhile, but that the commission had not been sufficiently finished in terms of the landscaping and publicity to raise its profile, although it had been used as a small detail in the yearly report from Cleveland Arts (1992).

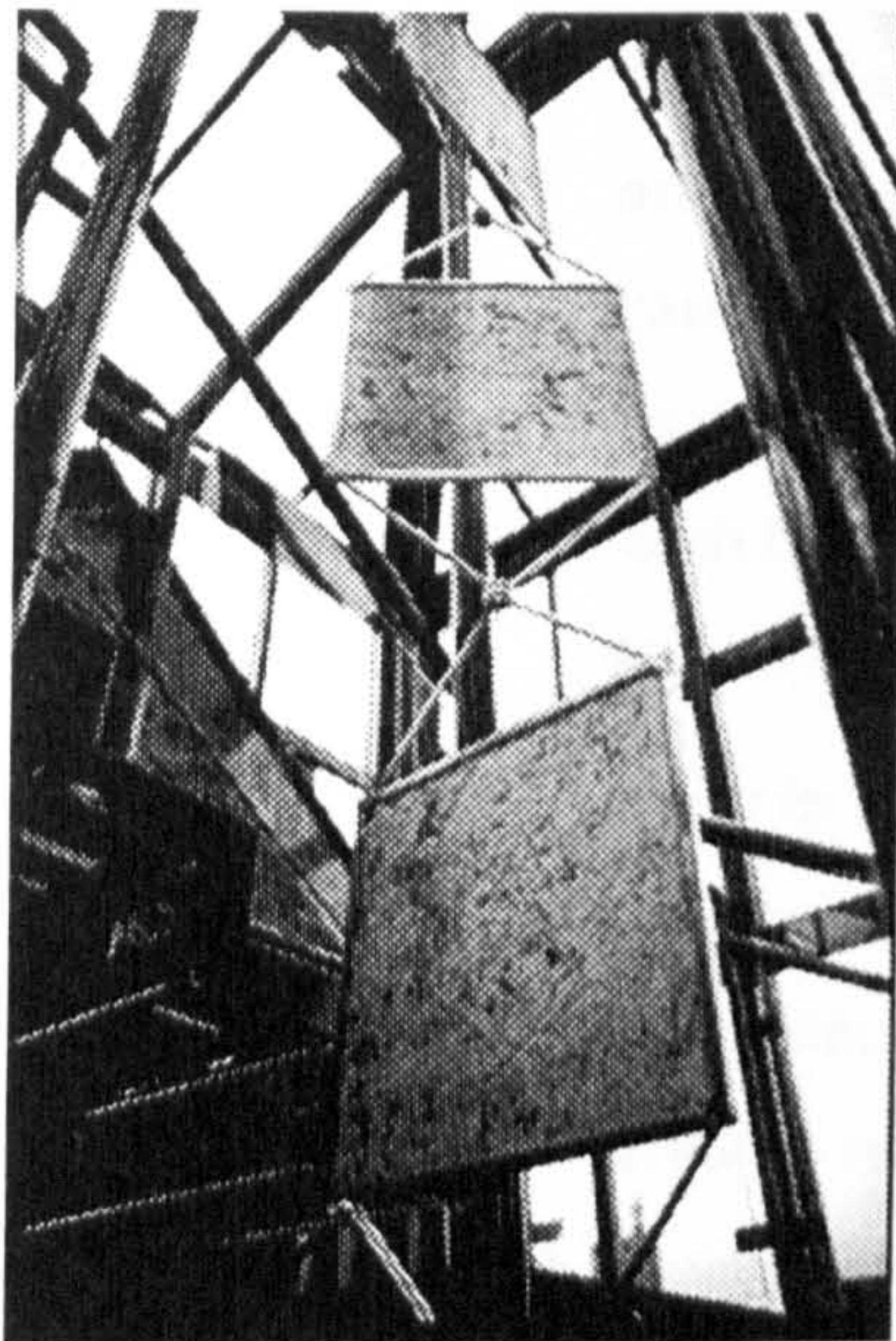
The residents of the estate were not consulted about the commission, although two of the three new houses, whose gardens the walls bounded, had been sold. There was a potential concern that they might not approve of the walls being ornamented, (although technically they belonged to the council) but this was not the case. Visitors and residents of the estate seemed generally enthusiastic about the work, although some passers-by expressed surprise that they had not yet been vandalised. This was probably the most encouraging response!

One retired couple, whose garden the second wall bordered, were particularly pleased with the work, and felt it showed that somebody had made an effort to make the estate a pleasant place to live. They were interested in how it was made and the source of the imagery, and felt generally that it added to the character of their house, rather than detracting from it.

4.2.2.7 Summary of analysis

- The artwork was commissioned at the very end of a building contract leaving very little time for detailed design and planning.
- The commissioning arrangement was straightforward with the roles of client, artist and Public Arts Officer clearly defined. The client wanted something designed, made and installed quickly and simply.
- The Public Arts Officer had a crucial role being the only source of communication between the artist and client
- The physical requirements and construction were straightforward, with brick being the most appropriate material for achieving decorative, functional and permanent site-specific art.
- The public was not consulted, instead the Housing Development Officer sought to represent their best interests.
- The budget was adequate only because of the short timescale and materials installation and transport provided.

4.2.3 CASE STUDY 3: “PILLAR FOR THE ESTABLISHMENT”
4.2.3.1 Introduction

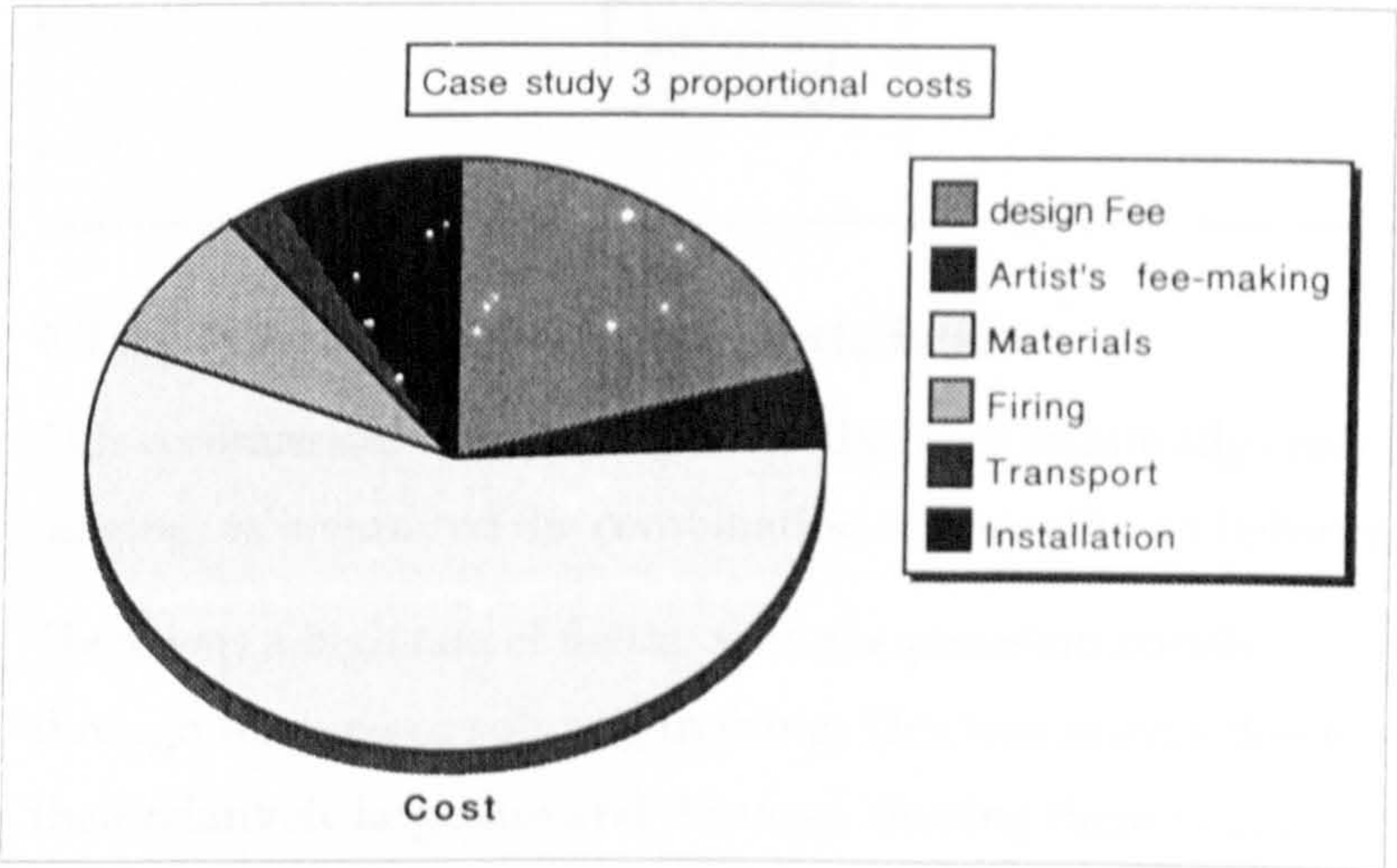


This commission was directly offered to the artist and contrasted with the other pieces in terms of scale, materials and approach to design. The project posed a challenge requiring the use of materials unfamiliar to the artist and a site which would not immediately be considered appropriate for ceramic work.

4.2.3.2 Funding and contractual details

The educational institution provided a budget covering the cost of materials along with the firing and transport of the work. This was sufficient as the work was made ‘in-house’ as part of the research programme, but would not have been feasible in any other situation.

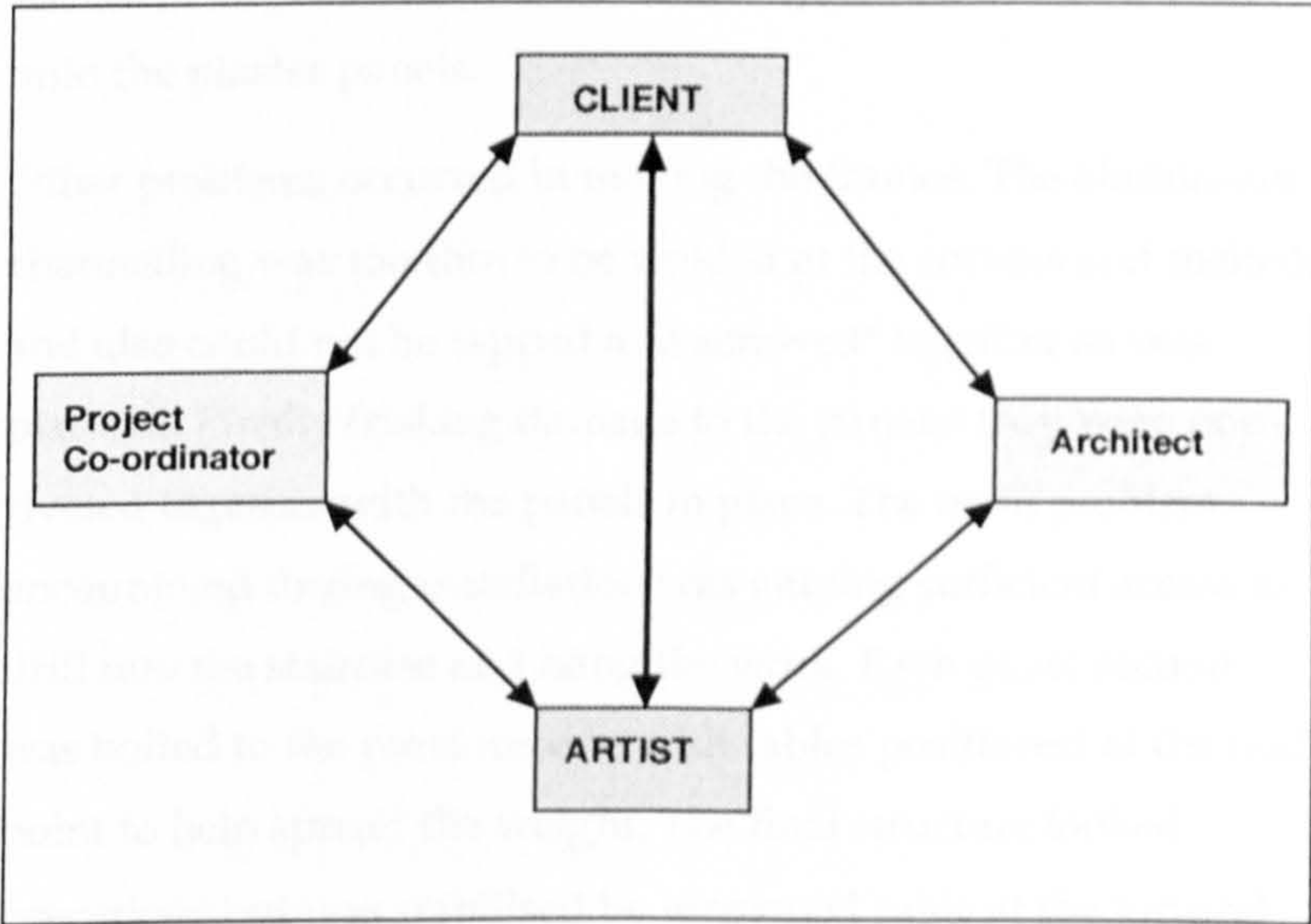
A written contract was largely unnecessary for the same reasons, and as the client was responsible for insurance and liability.



4.2.3.3 Collaboration

Once design proposals had been accepted and the commission was under way, there was very little contact between the artist and the other people involved with the refurbishment of the campus and the arts programme. The contact was through progress reports to the client, and occasional communication with the architect to confirm building schedules or to obtain technical information.

Early in the commission it became apparent that the Arts Programme Manager appeared to have neither the expertise nor the confidence to coordinate the project, and so it was left to the artist to make contact where necessary with the other people during the commission.



Relationships between the participants

4.2.3.4 Materials, making and installation

This commission was in many ways the most technically challenging, as it required the combination of strength and lightness. There was a high rate of failure with the porcelain panels through warping or splitting in firing. This was mainly due to their relatively large size and thinness, causing them to dry

unevenly and warp. They were extremely fragile, and so were easily broken whilst loading the kiln. The panels that did fire successfully, although they had the desired translucent eggshell quality, were almost too fragile to install in a situation where they would vibrate in the frames and might crack. In hindsight this could have been prevented using a transparent silicon sealant to fit the panels in the frames. The porcelain could also have been reinforced by mixing nylon fibre or even paper pulp into the casting slip.

After consultation with ceramic experts, it was decided to sacrifice this 'eggshell' quality in favour of strength and reliability and the final panels were made from a white stoneware. This was used as plastic clay, rather than slip, rolled in thin sheets onto the plaster panels.

Other problems occurred in making the frames. The aluminium channelling was too thin to be welded at the corners and melted, and also could not be tapped and screwed* together as was planned. Finally (risking damage to the panels) they were pop-riveted together with the panels in place. The main problem encountered during installation was gaining sufficient access to drill into the staircase and hang the work. Each panel section was bolted to the previous one with cables positioned at the mid point to help spread the weight. The final structure looked precarious but was stabilised by tensioned cable at the top and bottom of the stairwell.

Whilst greater prior knowledge would have undoubtedly led to a quicker and more pristine solution, the materials themselves were probably the most appropriate in response to the brief and within the project's constraints of time, funding and site require-

ments. Along with the use of unfamiliar materials, the project provided an opportunity to consider a different approach to ceramic in its application to architecture giving rise to ideas for further work using translucent porcelain.

4.2.3.5 Responses to the commission

The artwork was well received by the staff of the particular University as a whole, although some members of campus staff had concern over its durability, and whether it would get damaged from the vibration of the stairs. Another concern came from the porters who wanted to know how it would be kept clean, as they were already concerned with cleaning the glass stair treads.

People involved in the commissioning and connected with the campus were interested in how it had been made, and what the panels represented: some thought that the images were not obvious enough whilst others thought that the more abstract panels were the most successful. It was suggested that some kind of explanatory plaque could be sited near the work.

One proposal rejected early on was that the panels would move through the incorporation of bearings between each section. Even with the final piece designed to remain motionless concern was raised that the panels might move round or students would swing them too hard and damage them or cause an accident. This concern was unfounded as most users of the stairwell did not notice that the panels might move and were not interested in damaging the piece.

The clients, whilst acknowledging that the work was very different from previously completed commissions, felt that it was highly appropriate to the setting, reflecting the structure of

the staircase and containing images that related to the history of the place. The Art Programme manager had left by the time the new building was opened and so no response could be elicited. The architect and the coordinator in charge of the relocation of the campus both agreed that it was visually very well suited to the space. The architect had been very proud of the staircase as it had been different from his usual council refurbishment contracts, and so had been concerned that the artwork would not detract from his designs. Instead, he felt that it was both in keeping with and complementary to the structure.

4.2.3.6 Summary of analysis

- The commission was entirely organised 'in house' relying on current employees to organise and carry out the work at a minimum of costs.
- The employment of a project coordinator to manage the various art projects failed, leaving everyone to organise themselves; this did not affect the progress of this commission.
- There was no fixed budget or contract and no strict artist's brief other than to respond the requirements of the site.
- Ceramic probably was not the most appropriate medium for the site which seemed more suited to banners.
- The finished work was very different from the artist's usual style, and presented a challenge to use clay in a different way whilst still within a site-specific context.
- The work was finally considered appropriate in the space in terms of its structure, composition and use of materials.

4.2.4 CASE STUDY 4 Wadham Court Sundial

4.2.4.1 Introduction



This commission for a decorative brick doorway and panels for a sheltered housing scheme epitomises the collaborative ideal of art and architecture as described by writers such as Petherbridge (1988). The project was initiated by an architect who was willing to involve an artist at the earliest stages of a new building programme and to facilitate the inclusion of a major artwork that altered the visual impact dramatically.

4.2.4.2 Funding and contractual details

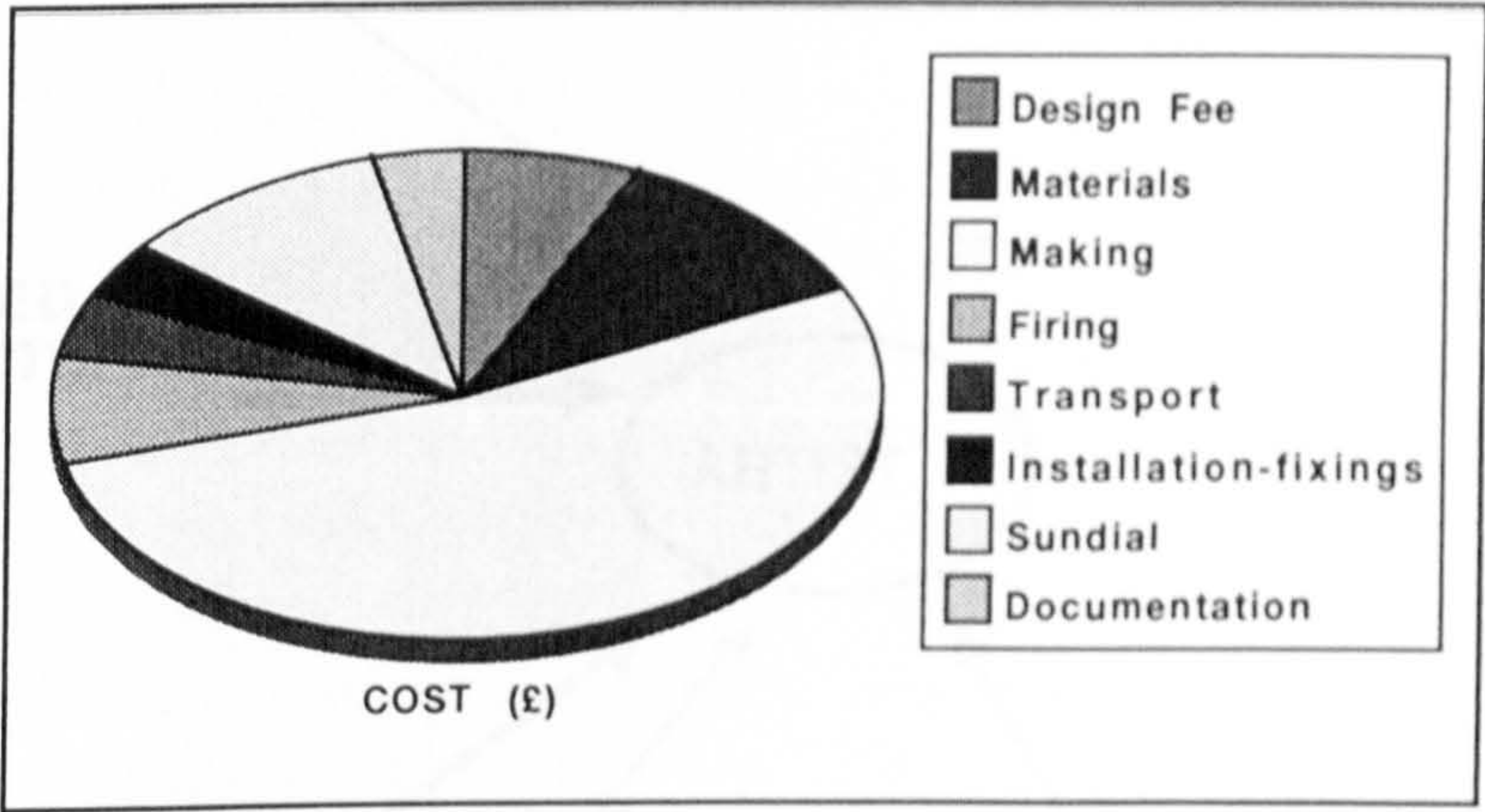
The funding for the project was achieved by describing the work as “special decorative brickwork” rather than directly revealing it as a commission for artwork, which might have been seen as a waste of money by members of the board of directors. This was also because the housing association had to bid for funding for all aspects of a new building and, as the Development Officer stated, they barely get enough money to put roofs on the buildings, so putting money into art would probably not be approved.

4.2.4.3 Contract

There was no formal contract drawn up other than minutes from a meeting discussing the role of the artist within the building programme. It was decided by the client at this meeting that the artist would be a ‘nominated subcontractor’ and would be paid by the building company. This was the only fault in the commission, the consequence being that the artist could not be paid in stages throughout the commission, and had to invoice

after the building's completion and first inspection. It was also decided that the artist would be liable for any necessary repairs to the work for up to one year after completion of the contract; which is the generally accepted procedure for site-specific artwork. (National Artists Association, Policy for Artists 1995)

Proportional costs of Case Study 4



4.2.4.4 Time scale

The total time given to this commission was approximately 20 months from initial discussion to completion and overlapped with case studies 2 and 3. At the point at which the artist was introduced into the building programme, the designs were just being finalised giving both the time and opportunity for the artwork to be introduced into the plans. As with other large commissions the major part of the time was spent in negotiation and design with the making and installation being the final smallest part.

4.2.4.5 Collaboration

The collaboration involved firstly, the client and the architect, who worked together in researching and developing the design of the housing scheme, basing it on a style of building that was of personal significance to the client. The architect had the insight to commission an artist to produce artwork for the

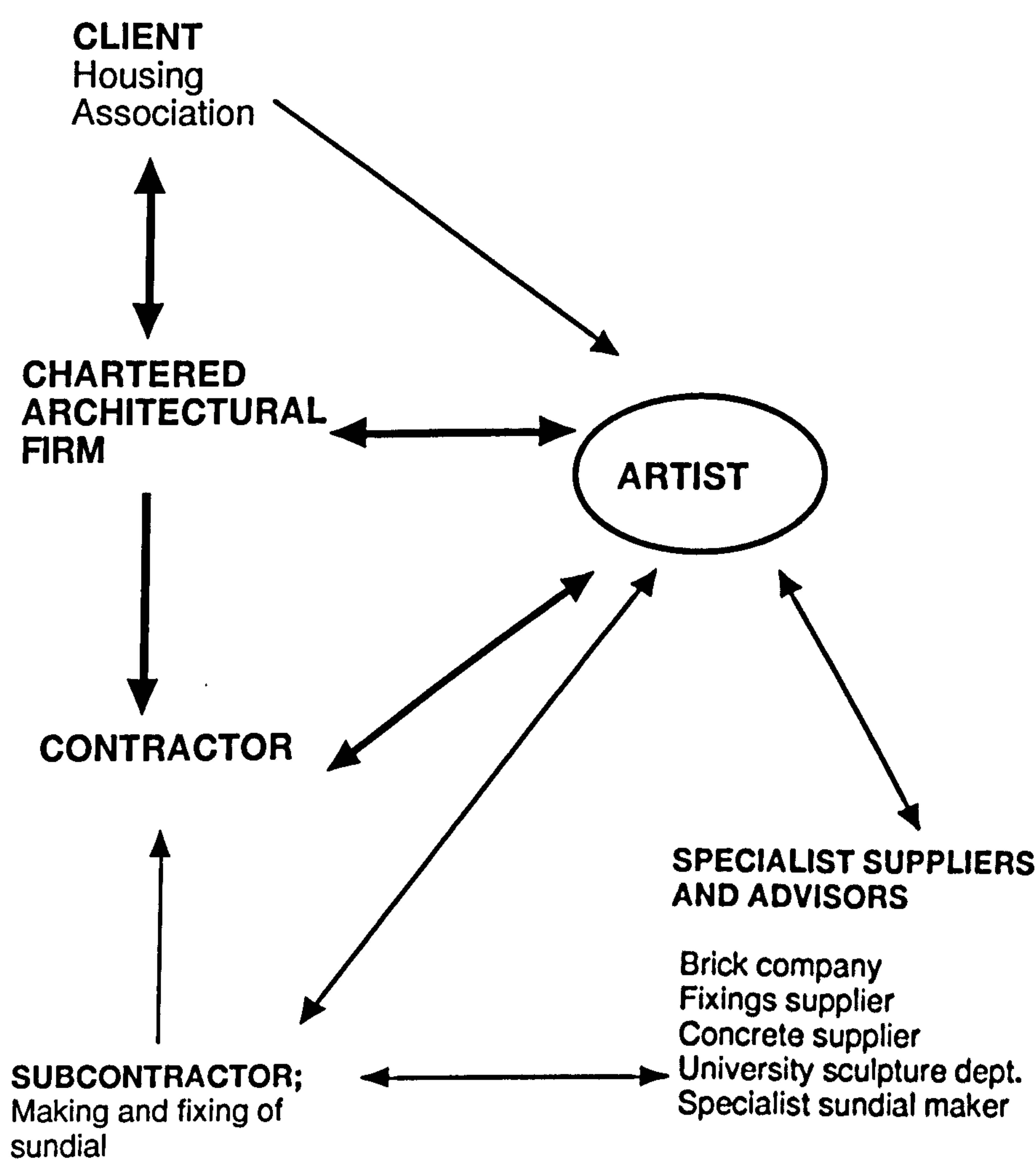


Diagram showing the relationship and contact between parties involved in the commission

building, and to involve the artist in initial discussions regarding the nature of the required ornament and where it should be located. An example of the level of collaboration was illustrated by the architect including a drawing of the proposed doorway design in a presentation drawing of the building for the director of the housing association.

The architect persuaded the client to consider including ceramic features into the building design and introduced the artist to the client. Throughout the commission the artist was in regular contact with the senior architect who had initiated the project and, once the designs had been approved and the making was under way, with the project architect. Joint decisions were made regarding e.g.. suitability of materials, glaze and mortar colours as well as consultation on details of design specifications and building schedules.

The client maintained a close interest in the progress of the building work and the making and installation of the ceramic details throughout the commission.

Other individuals involved in the project were the builders who helped to install the work, who were initially reluctant to install such a complex piece, but became more enthusiastic as the installation progressed, and completed the work within a few days. The design student who made the sundial, worked closely with the artist/researcher in developing designs for the sundial and then making and installing it. There was also a ceramics student on placement from a London college helping to finish and install the artwork.

It was unusual to be involved with a project where both client and architect worked so closely together and encouraged the contracted artist to become involved in decision making about the commission.

The Housing Development Officer stated afterwards that the Housing Association were quite unusual in choosing to commission a specific architect to design their buildings, preferring to work with someone familiar rather than putting the contract out to tender. They also had a policy of trying, where possible, to integrate details into the buildings to give them an individual identity.

4.2.4.6 Materials, making and installation

Aside from initial firing problems with the recycled clay blocks (ref. 3.2.4.5) the use of brick was an appropriate material for this artwork and type of commission for a number of reasons:

- It was easily integrated into the architects plans and into the building on installation.
- The contractors and clients immediately understood the material and had confidence in its weatherproof qualities etc.
- The glazed brick panels created an immediate focus in the building and also highlighted colours in the surrounding brickwork that may not have been obvious.
- It was easy to calculate shrinkage and fitting of the piece as it was built in units.
- For this reason also, the work was easily transported to site and reassembled with little risk of damage.
- The cost could be concealed by referring to the work as 'special bricks'

The small brick panels were easily installed being mortared into spaces left in the brickwork. The bricklayer at first started to build the doorway up like a normal wall intending to use *galvanised steel mesh* every five or six courses. However, the weight was too great and it quickly became obvious that each block would have to be fixed individually to the breeze block backing.

It was decided that every one of the blocks would have to have steel mesh attached to the back using resin and glass fibre so that it could be screwed into the wall, and although this was a time consuming activity, it proved worthwhile in knowing that the blocks would not fall off the wall. Each row was then mortared to seal the surface, and the back was left free from mortar to allow alkali salts to escape rather than peeling the glaze off at the front.

The arch did not exactly fit, both because it had shrunk in the firing and also as the brick work on the two sides of the doorway had been laid unevenly. This was solved by sawing four of the bricks around the key stone into the correct size using a diamond tipped circular saw, and was only noticeable at the finish to those who knew what had been done.

The sundial was fixed with resin anchor bolts through the brick panels into the wall behind. The colours and form suited the rest of the piece, but seemed a little small and detailed to be seen from below. It had been designed to work, but it was almost impossible to see a shadow on the blue brick behind; and there had also been a miscalculation in the position in the building which meant that the sun only touched that wall at certain times of the day; but this did not appear to worry the client.

The main feature took approximately five days to install with the making time spread over eight months and the total commission extended over two years.

4.2.4.7 Responses to the commission

The artist/researcher attended the official opening of the building and, as far as could be ascertained, the response to the commission was good, although a number of people expressed surprise at the large scale of the work. There were no comments as far as could be ascertained that the work was a waste of money, although a few wondered where the budget had been found, and thought it was unusual for a sheltered housing

scheme to have commissioned such a large and ornate feature. Although members of the board of directors had seen drawings of the work on the architect's plans, they had been unable to visualise what it would look like when installed and at early meetings to discuss imagery, they generally left these decisions to the artist/researcher and the architect.

The resident warden of the housing scheme moved into the building while the work was being installed and was particularly enthusiastic. She had encountered some faults with the design of the building but had no doubt that the ceramic details had been worthwhile financially in preference to more practical things. The warden thought that it was important that people in sheltered accommodation should have pleasant and stimulating surroundings as much as anyone else, and expressed strongly the view that putting artwork in smaller public buildings where it would be appreciated was more important than putting it in large civic buildings.

On the question of whether the residents should have been consulted, the warden felt that most would not have known what they wanted and would have preferred to leave the design work up to the artist. The residents in general were delighted with the building as a whole, feeling that an effort had been made to make their surroundings pleasant.

The Director of the Housing Association was reported to be pleased with the work especially as it had given a particular identity to the housing scheme whilst complementing the architects designs.

The Housing Development Officer who had been involved with the instigation of the project had been away on maternity leave, and so did not know until the opening what the building and sundial would look like. She also had found it difficult to visualise the artwork when presented with drawings and said

that no one had realised how big the piece would be. The Development Officer and the Director both felt that it was appropriate for this particular scheme, making a grand focal point, but it probably would not have fitted in with other less impressive schemes. The smaller panels would have been good to integrate in other schemes to develop a kind of corporate image but worked well in continuing the theme and colours around the building.

When questioned about whether more functional features (e.g., seating) would have been more appropriate, the consensus was that having artwork built into the fabric of the building made sure it could not be vandalised in such a public place.

The Housing Officer considered the artwork to be “a bargain” considering the amount of work that was involved, whilst being important to show the residents that consideration had been given to their surroundings and quality of life. The housing association would like to be able to finance similar projects but would be very unlikely to, especially on this scale, without grants. The Development Officer had not heard of “Percent for Art”, but stated that she and other similar organisations would welcome some financial or tax incentive to consider incorporating art in future building schemes.

The Senior Architect who had initiated the commission was very pleased with the work, feeling that it had shown the importance of involving an artist at the earliest stages, in order that the work might be visually and physically integrated with the architecture. He was very pleased with the building as a whole design concept, and felt it was appropriate for a sheltered housing scheme to have as much attention to detail as any other public building. When asked whether he had known what to expect, or felt it was a risk allowing an artist to have such a major part in the visual impact of the building, the senior architect stated that he had every confidence in the artist’s being brought in as an expert, with the freedom to judge what was

best. He felt that, as with the building design, the doorway had been inspired by and grounded solidly in a tradition of architectural ornament and design.

The architect felt that there was a returning trend towards incorporating ornament in architecture, (particularly in community and environmental architecture) but that it derived from the idea of humanising spaces, using the best quality natural materials, rather than from a return to “the abominations of the Victorians”, whose later architecture, he felt, used ornament indiscriminately to conceal bad structural building design.

In a previous building for the same client, similar mechanisms were used to conceal the cost of artwork, describing prints as ‘decorative wall coverings’. This, he felt, was justified, if it facilitated the incorporation of details that put the finishing touches to architectural designs; the way forward for artists and designers was to find mechanisms to have their designs included in buildings as a matter of course (e.g. in preference to mass produced door handles), rather than spending time talking about policies like “Percent for Art”.

The Project Architect agreed with most of what had been said except that he felt that the artist should have been involved even earlier with discussions regarding the structure of the building and inclusion of ceramic details. He felt that, as brick was inherently a structural material, the archways could have included some aspect of detail in their design and structure rather than being supported by steel formers with the brick details being cladded on after the main building work was complete. He felt that the real role of art in modern architecture (especially that using clay or brick which had a history of being allied with architecture) was to be totally integrated with the

design of the building, and artists probably had a lot to offer to architects in having a different viewpoint, less concerned with technical constraints.

4.2.4.8 Summary of analysis

- The commission was an ideal model of an artist and architect collaboration, as it was instigated by an architect who had the insight and enthusiasm to include artwork in his designs.
- The architect was not concerned that the artwork might detract from the rest of the design.
- The artwork was site-specific and would not have been appropriate in another setting.
- The general consensus was that it is as worthwhile and important to have artwork in smaller “community” building projects as in large prestigious civic buildings.
- The residents appreciated the fact that trouble had been taken in the design of the building and artwork.
- The doorway provided a focal point for the building with smaller details bringing a continuity of design.
- There are ways of introducing and financing art in architecture if the client and architect are prepared to use them.
- The fact that the work was brick helped persuade the client to approve the commission.
- The colour in the glazes highlighted aspects of the architectural design and colour in the surrounding brick.

4.2.4.9 Implication of analyses

The following section re-examines the four case studies focusing on common and contrasting aspects of the commissions. From these points conclusions will then be drawn viewed in relation to current practice and policies within the field of architectural ceramics and site-specific art.

4.3. ANALYSIS (AND COMPARISON) ACROSS CASE STUDIES

The case studies have been divided into five sections corresponding to the different stages in the commissioning process and the sequence in each of the case studies detailed in section 3.

- Background
- Roles of the participants- collaboration
- Artist's response to the brief
- Responses to the completed work
- Summary of analysis

Each of these stages has been summarised as a series of key points set in tables in order that the four Case Studies may be easily compared . This information has then been expanded upon and examined in greater detail in the following sections.

4.3.1 Background (see table 4.1 over leaf)

This examines the aspects leading up to the commissioning of the artwork including the selection of the artist, site requirements, funding and time scale.

BACKGROUND	Case Study 1	Case Study 2	Case Study 3	Case Study 4
Process of commissioning	Artist chosen by client from shortlist of local artists' work.	Artist approached by Arts Officer on strength of previous work	Artist approached directly by client	Artist approached by architect after approval by client
Type of building / site	New Medical Centre. Internal atrium	New housing development, entrance road boundary walls	University campus main stairwell	Housing association Sheltered housing Scheme
Site requirements	Safety, wheelchair access, drainage, height	Integrated in boundary walls. vandal-proof	Safety. Permanent. Lightweight	Permanently integrated into brickwork, visual focus & highlights.
Artist's brief	Freestanding, functional (containing plants) & decorative	Relating to trees- foliate decorative forms. Site - specific	Piece to incorporate /use old winch. Imagery site-specific	Site -specific relating to architecture. Integrated design
Timescale	9 months	2 months (overlapping with CS3)	3 months (overlapping with CS2&4)	20 months (overlapping with CS3)
Funding & contract	Percent for Art. Artist as subcontractor	Allocated from Capital Budget. Art added at end of contract	Materials costs only. "In house" project	Cost concealed in brick budget. Artist as subcontractor

Table 4.1: Cross- case comparison: Background

4.3.1.1 Commissioning process

Before a commission for an artwork can be initiated, the client must find some way of contacting the artist, this occurs in different ways:

- through a public arts officer
- through a regional arts board
- through open competition
- through limited competition
- by the artist being approached directly

With the increased use of computer data bases it has become possible for regional arts boards to store information on artists available for work. The most comprehensive of these at present is Axis, based at Leeds Metropolitan University, which stores information on artists based in England and Wales which are accessible through a number of categories and accompanied by visual examples of the artists' work. Similar systems exist or are being set up in Scotland, Ireland, The Crafts Council amongst numerous other arts boards and agencies.

Although these new systems make it easier for a client to obtain information on artists and also generally to increase the scope of potential clients for artists, there are still some problems:

- As with slide indexes they rely on artists submitting and updating information
- They presuppose that clients know about the data bases and would take the time to use them
- The data bases in different regional areas are at present not linked up to one another (although this is intended in the future)
- The artists agent still has an important role in bringing the client and artist together; the indexes may be more useful to artists agents in this respect

The only commission where a slide index was used was in case study 1. In this case, the client was aware of using the Regional Arts Board as a way of contacting artists. The Percent for Arts officer made a selection of artists from the slide index advising and helping the client to select a suitable artist. In Case studies 2, 3 and 4 the artist was approached directly with no competition or selection process involved. The choice of artist was based solely on the strength of previous work which was considered appropriate for the commissions. Although this way of commissioning reduces the time and expense of looking through a number of submissions and interviewing potential artists, (and is certainly encouraging for the artist), it may not always be appropriate. It relies on the artist having a proven record of commissioned work, whereas a limited or open competition gives artists with no previous experience the opportunity to respond to a brief. This broadens the range of artist's work being seen by the client and may result in a more original or appropriate choice of artist and response to the particular requirements of the commission.

In case study 3 the specialism of the artist/researcher did not initially seem appropriate for the site but again serves to illustrate that work is very often obtained as a result of personal contacts and also based on the artists previous work. This also gave the opportunity for the artist /researcher to work in an entirely different way with unfamiliar materials whilst still within the field of ceramics.

In the first two commissions the arts officers had an important role of bringing the artist and client together and acting as a mediator. The first case study illustrates the more usual approach of a selection being made from a short list of artists, however, usually this would be drawn up from a submission as response to the advertising of the commission in the local or arts press.

For an artist working in a field such as architectural ceramics, the fourth case study is an illustration of the ideal approach to commissioning this type of work. By the architect approaching the artist directly it enabled the artwork to be considered as an integral part of the building design rather than after the building's completion.

As described in section 2., this was how ceramic detail was historically incorporated into architecture, as a facing material combining function and ornament, as part of the overall building design and using the material's particular physical and decorative qualities to best effect. Architects such as Waterhouse liaised closely with modellers and manufacturers of terracotta in order to keep close control over designs with most terracotta details commissioned as one-offs. These were either designed by the architect or, by artists who were specifically commissioned to work for manufacturers such as Doulton.

With the architect in control of the commissioning, and in case study 4 with the agreement of the client, there was greater freedom for the artist to exploit the potential of the material and to design the positioning of ceramic details. There is no doubt that had the commissioning taken place at a later stage of the building programme, or directly by the client, that the resulting artwork would have been very different in terms of form, scale and position within the building.

The trust given to the architect by a client is given to the artist if they are chosen or recommended by the architect. In Case Study 4, once the artist had been approved, the client left all supervision and decision making to the architect. This ensured that the artwork was considered as a valid part of the building programme, rather than as a nuisance that might delay the completion of the contract. It also ensured that there was good communication between all the parties involved and with the

artist being introduced early in the contract, it was possible to detail the time scale of making and installing the artwork in the main builders programme.

4.3.1.2 Type of building /site

Fundamentally, the buildings in all four Case Studies (Medical centre, housing estate, University campus and Sheltered Housing) were very similar in that they were all buildings designed for a specific use and group of users. Although ostensibly public, they were not public in the sense of a park, city square or municipal building, where people can walk through casually. Generally the only people who use these buildings would be those with a specific reason to be there: as residents, patients, students or staff. It is questionable, therefore, whether they are technically public at all (and as a consequence whether the artwork could be deemed Public Art).

Rather than being highly prestigious public spaces such as a Museum, Civic Building or a city square, these buildings would generally be termed as 'community architecture'. These types of buildings might appear to be less likely sites for artwork than buildings that are more accessible or in the public eye, but are more usually targeted by current art in architecture schemes as part of larger urban renewal programmes. As with Ruskin's ideas to bring art into schools, shops etc. for "ordinary people" (ref. section 2.1), art is currently seen as a good thing.

Interestingly, none of these buildings were connected with Government development schemes and the inclusion of artwork arose instead from the clients wanting to introduce individuality, distinction and quality into their building schemes, rather than from some financial incentive.

The general consensus arising from responses to the commissions was that it was just as worthwhile and important to introduce artwork into these type of buildings as into city centres.

4.3.1.3 Site requirements

With the site requirements there were again similarities between the Case Studies with all requiring the artwork to be permanent, vandal proof and maintenance free. This is evidentially a reflection on an age where there is increasing incidence of deliberate damage to buildings which have a free access.

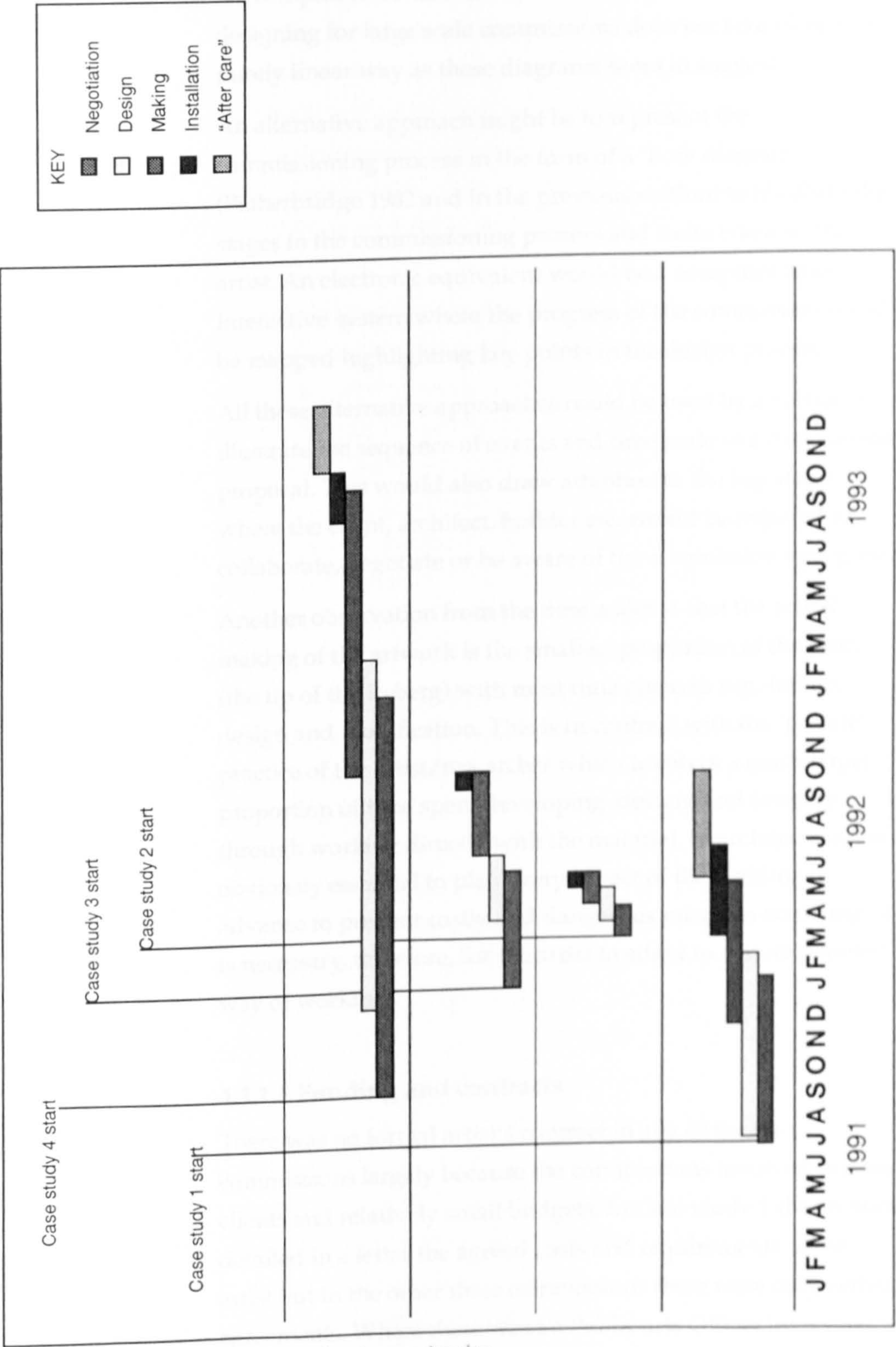
It was interesting to note also that the specific requirements were generally more related to practical aspects of this type and health and safety, rather than to aesthetic matters, which were left up to the artist's discretion . Where this would have been beneficial was in Case Study 1 where a discussion regarding the decor of the site in relation to those of the proposed artwork would have prevented a clash of colour between floor and brick.

4.3.1.4 Time scale

(Comparative table overleaf)

There was a noticeable difference between the lengths of contracts contributing to the quality of the work produced. Although all the commissions were successfully completed on time, Case Studies 2 and 3 were both very short contracts running concurrently with each other and Case Studies 1 and 4. The longer time for negotiation, design and research into imagery and materials definitely benefited the latter commissions with the result that the finished work was better conceived and executed. With a material such as ceramic to be successfully integrated into an architectural programme, there must be enough time allowed for experiment, allowance for possible failure and for the work to be designed as an integral part of the building.

Although the case studies appear (earlier timescale diagrams) to have taken place sequentially they in fact overlapped, with case study four being at the design and planning stages well before



Time table of the four commissions showing overlapping

the completion of Case Study 3. This shows that realistically designing for large scale commissions does not take place in a purely linear way as these diagrams seem to suggest.

An alternative approach might be to represent the commissioning process in the form of a 'flow diagram' (Petherbridge 1982 and in the previous section) to illustrate the stages in the commissioning process and route taken by the artist. An electronic equivalent would be a computer based interactive system where the progress of the commission could be mapped highlighting key points in the design process.

All these alternative approaches could be used by an artist to illustrate the sequence of events and time scale in a commission proposal. This would also draw attention to the key stages where the client, architect, builder etc. would be required to collaborate, negotiate or be aware of the commission's progress.

Another observation from the time scales is that the actual making of the artwork is the smallest proportion of the time, (the tip of the iceberg) with most time given to negotiation, design and modification. This is in contrast with the 'private' practice of the artist/researcher which involves a much larger proportion of time spent developing designs and imagery through working directly with the material. In architecture it is obviously essential to plan every aspect of the building in advance to prevent costly and dangerous mistakes occurring. It is necessary, therefore, for the artist to adapt to a more planned way of working.

4.3.1.5 Funding and contracts

There was no formal artist's contract in any of the four commissions largely because the commissions involved private clients and relatively small budgets. In Case study 1 the architect detailed in a letter the agreed costs and requirements of the artist but in the other three commissions there were only verbal agreements. Where there was an Public arts Officer involved

there was a greater degree of assurance for artist and client regarding the contractual obligations. In Case Study 4, however, the client relied on the assurance of the architect that the artwork would be satisfactorily and promptly completed. In general, it would have been better to have had written agreements and the artists requirements clearly outlined at the start of the commission.

The only major problem that emerged in all of the commissions was regarding payment. After extensive research and development into contracts, it is now generally agreed by organisations representing artists e.g. The National Artists Association, Public Arts Wakefield, Northern Arts and Common Ground, that artists should be paid in stages (usually three) throughout the duration of a contract (ref. section 2). This enables the purchase of materials, design and development as well as being an incentive to complete the work.

In Case Studies 1,2 and 4 (Case Study 3 included materials costs only) the artist was not paid until the artwork was completed, which, as detailed in the previous section, would be infeasible without a supplementary income. In Case Studies 1 and 4 the artist was listed as a subcontractor and as such, was answerable to the building contractors. Although this initially appeared to be a good way for the artwork to be included into the main building contract, it meant that payment is withheld until the end of the building contract and if the contractors are not paid or go bankrupt the artist will not be paid. The artist is also seen as the lowest person in a hierarchy of people to be paid. One solution might be for the artist to be given a separate contract with the commission budget specifically allocated and kept apart from the capital budget. The disadvantage in this approach might be that if the aim of the artist is to be involved as part of the design team there may be a resistance to the idea that the artist should be paid separately.

The four commissions involved different funding mechanisms and ways of introducing art into the building contract. (*Percent for Art*, remainder of capital, materials only and concealed in the budget) The allocated budgets were generally adequate but only as they were all supplemented by sponsorship in kind: materials, transport and installation. In carrying out the commissions as part of a research programme rather than as a profession, the commission fee could be relatively low as the many hidden costs were covered by the University: studio, firing costs, National Insurance, etc.

As described in section 2.4.2 (p. 86), allocating a percentage of the capital budget has been generally seen as the best way for funding artwork in architecture. In Case Study 1, although the allocation of 1% of the capital budget ensured that a reasonable amount was identified to fund the artwork, once the artist was designated a subcontractor, control of this budget was given to the building contractors and was no guarantee that the artist would be paid. It appears that *Percent for Art* is more appropriate for large public building schemes and city centre redevelopment where it can be accountable and is better understood. The main problem in smaller building programmes is that even one percent of the capital budget can seem an infeasible large proportion to be allocated to artwork, making clients reluctant to adopt it. This was corroborated by the architect in Case Study 4 who stated that it was unrealistic to expect clients such as housing associations or the caring professions to justify to their directors or shareholders large sums being identified for anything that is not seen as strictly functional.

Case Study 2, by comparison, was a simple case of a client commissioning artwork as a finishing touch to a new housing scheme. In many respects this was the simplest arrangement and although the artist was again paid only on completion, the

short duration of the commission meant that this was the most financially viable of all the commissions. Contractually, this was also comparatively simple with no negotiation between the artist and client and all aspects taken care of by the arts officer. Considering the short time scale, this was the only way that the commission could have been completed, however, it was not ideal from an artistic perspective as there was not sufficient time for design and development of imagery.

In Case Study 4 the artwork budget was concealed within the brick budget. This appears to be an increasingly common way to introduce artwork into a building contract and is in some ways ironic that the artwork is seen as an important feature of the building and yet cannot be seen to have any money spent on it. As a means of incorporating good 'one off' design and artwork in favour of mass produced items, the architect saw it as more practicable than Percent for art for the majority of building projects.

This approach may in fact favour materials such as brick and ceramic which can be identified in quantity surveyors reports by their functional characteristics (e.g. "special bricks") rather than as artwork. It would also tend to favour crafts people whose work has a functional as well as an aesthetic value and is the way in which art and craft was incorporated in architecture historically. It does, however, undervalue the role of the artist working in architecture which has been campaigned for through the implementation of Percent for Art but may illustrate realistically how artists and designers can expect to be involved in contemporary building projects.

4.3.1.6 Summary

- The longer commissions gave more opportunity for the development of appropriate imagery, use of materials and locating of the artwork.
- Although Percent for Art appears to be a solution to the undervaluing and under payment of artists, it would seem to be not always appropriate for smaller commissions,
- Percent for Art as a mechanism for funding Public Art is not widely known about or understood by clients and whilst benefiting artists is not seen as an incentive to encourage clients and architects to commission artwork.
- The concealing of art costs in a capital budget may benefit those fields and materials that combine functional and aesthetic qualities. (e.g. brick)
- The artist has little to gain from being a subcontractor.

4.3.2 The participants and collaboration (Table 4.2)

4.3.2.1 Collaboration

The term *collaboration* implies an equal share of responsibilities in working together to achieve a common aim and where there is some mutually beneficial outcome as an end result. Although there were aspects of collaboration in all the commissions, it was only in the fourth that there was a sense that all the parties involved with the building design and the artwork were communicating and working together as a team.

The immediate conclusion that can be drawn from the analysis of the case studies is that the fourth case study was the most successful in terms of the design, the commissioning process, the artist-architect collaboration, and aesthetically in terms of how the work fitted in with the building and surrounding site. This was certainly due to an increasing level of confidence in designing, making and negotiation on the part of the artist; with the procedures followed being informed by the previously completed projects.

The success of this project was also due to the level of communication between the different parties from the start of the building contract. The role of the artist was made clear to everyone at the earliest stages, allowing questions to be raised regarding the nature of the artwork and details of material and installation. This allowed the artist to become involved as part of the building team as a specialist contractor rather than being seen as someone brought in at the last minute and causing disruption to the building programme.

In the other projects there was varying levels of communication between the artist and others at different stages of the negotiation and design process, but to what extent this could actually be described as a collaborative process is questionable.

PARTICIPANTS- roles/input	Case Study 1	Case Study 2	Case Study 3	Case Study 4
Artist	Specialist- design a feature to enliven site. To realise client's ideas- collaboration	Commissioned to make artwork only, no involvement in negotiation	To make a feature to mark the opening of a new building linking past and present	Commissioned to collaborate with the architect to design integrated ornament
Architect	Distant relationship- little input after technical specifications	No input- project at end of building contract	Some input regarding technical details	Initiation of project. Close collaboration throughout
Client	Instigator of commission, maintained contact throughout	No direct contact beyond outlining requirements for work.	Initiated project and outlined requirements at start	Developed artist's brief with architect. input into building design
Arts Officer	Liaison between artist and client. Project manager.	Instigator & manager of project. Liaison between artist and client	Not involved	Not involved
Public/users	Medical centre staff consulted but not the patients	Not involved	Not involved	Not involved
Others	Contractors involved with installation. Herbs provided by specialists	Contractors involved in installation	Not involved	Contractors in installation. Sundial made by specialist
Assessment of collaboration	Good between client, Arts Officer and artist. Poor with architect and contractors	No real collaboration on design-artwork brought in at the end of contract	None beyond initial discussion of imagery	Close collaboration between artist and architect on design

Table 4.2: Roles of the Participants

In the second project (to design and make carved brick walls in Middlesbrough) the time scale was so short, with the artwork commissioned at the end of the building contract, that there was very little negotiation involved other than initially discussing the imagery. Although in many respects this project was successful, fulfilling the contractual requirements in the allotted time, it would certainly have been more successful if the artist had been involved at an earlier stage. This would have allowed more time for research and development of ideas and imagery and may have introduced the possibility of incorporating artwork into other areas of the housing development. There was no involvement with the architect at any stage of the contract because the artwork was commissioned at the end of the building programme but again, negotiation at an earlier stage could have resulted in a comprehensive programme of integrated ornament throughout the development.

Some of the relationships between the artist and others proved to be more successful and constructive than others. In particular, the collaborative relationship between artist and architect proved a crucial factor in the successful outcome of the commission. This was noticeable on reflection of the first commission where the architect was not closely involved, as compared with the fourth commission which was largely instigated by the architect. In any art in architecture project the architect is important to establish a link between the artist and the client and the contractors. As indicated in section two, the architect was a key figure historically in introducing art and ornament into new buildings and this role appears to still be influential today. The architect's approval and support for the inclusion of artwork appeared to help legitimise the role of the artist in the eyes, especially, of the building contractors, planners and surveyors who were suspicious at first of the inclusion of an artist.

Significantly, the 'public' (residents, users, passers-by) were not directly consulted or involved with the design of any of the art works although they were supposedly designed as *public art*. This was because all the projects involved new building schemes with no resident group of people. In fact, the general feeling expressed by the clients was that, even if possible, the projects would not have benefited significantly from the public being consulted.

In Case Study 4, for example, the Development Officer suggested that the residents may not have known what type of artwork they might want and preferred to leave decisions regarding the nature of the artwork to the artist instead. On completion of the commission there was a general consensus that the work had been

This calls into question the nature of these public spaces and public art; whether or not the sites for these commissions could actually be called *public spaces*. All the sites of the commissions were similar in that they were public buildings or spaces, but not in the sense of a park, town square, railway station or other similar site where there is a more transient population. Instead, access to the sites was limited to people who were staff, residents or users, or with an express reason for visiting the building, rather than being passers-by.

Consultation of the 'public' (users/ residents) appears to be most applicable where the artwork has been commissioned for a building with an existing user group or a major public building where public money has been invested. It would have been both impractical and of no major artistic gain to have tried to consult with the public in these projects. Instead, the clients (doctors, housing associations and university) all chose to make decisions regarding the building design and the artwork on behalf of the users (patients, residents, students and staff). In this respect the

projects were almost private commissions in the tradition of a patron or benefactor requiring some embellishment for a new building to enhance its appearance, prestige and meaning.

4.3.2.2 The client

The client was fundamentally the instigator in all of the case studies having the final decision regarding the nature of the imagery, and whether the project was to go ahead. Beyond this point the client had varying degrees of influence and interest in the different commissions as they progressed until the final installation, Ranging from the first case study, in which the client was directly responsible for the initiation of the commissioning process, and maintained a close interest throughout, compared to the second case study where the artist had no direct contact with the client who instead left all arrangements and negotiation to a Public Arts Officer.

The other two commissions demonstrate a more typical commissioning process, with the client approving design proposals and then leaving the artist to complete the work, whilst maintaining a distant interest in the progress of the work until the final installation.

The commissions were similar in that all of the clients were organisations representing the interests of the users or residents of the site, rather than the public being directly consulted regarding the nature of the proposed artwork. It was technically impossible for the user groups to be consulted prior to the commission, as the buildings had not been built or occupied at the initial commissioning stages.

The general consensus of both the clients and the users on completion of the work was that they would not have known what they wanted, and were happy to leave decisions regarding the design of the pieces to the artist. If the remit of the commission was to introduce artwork into an existing location

with an established user group or residents it would have been necessary to consult them in order to establish a sense of participation in design and ownership of the work.

4.3.2.3 The architect

A major outcome from the reflection on the four commissions was that there is no doubt as to the importance of the role of the architect - artist relationship. This may have been particular to these projects as they were all relatively small site-specific or art in architecture projects as opposed to public sites involving local authorities, planning departments and most importantly the public. There was no architect involved in case study two as the artist was introduced into the project at a very late stage. It was not necessary for the artist to be involved in negotiation with the architect but there might have been the possibility for incorporation of brick details into the houses themselves if the artist had been brought into the project at an earlier stage. The immediate reaction on reflection of the four commissions was that the fourth, the sheltered housing scheme, was by far the most successful. One significant reason was that the architect had such an important role and input into the project from the earliest stages. This project may also have been the strongest because of an increased level of confidence on the part of the artist in designing, working with the material and in negotiation skills.

4.3.2.4 The Public arts officer

There was a public arts officer involved only in Case Studies 1 and 2 which was extremely helpful in supporting the artist, more especially as they were the first commissions undertaken by the artist/researcher. In both cases the Arts Officer acted as a link between artist and client, setting up initial meetings and negotiating contractual details, costs, time scale etc. In Case Study 1, the Arts Officer had a particular role as being specifically a Percent for art Officer based within local

government and responsible for implementing the use of Percent for Art in Public art projects within the region. There is some debate currently (ref. section 2, Irwin 1989) as to whether an arts officer is actually necessary in Public Art commissions and may even prevent necessary discussion and direct contact between the artist and the client.

It emerged from the four commissions undertaken in this research that the usefulness of an Arts Officer's involvement largely depends on the nature of the project. For larger commissions involving a number of parties and long contracts the arts officer was certainly useful to initiate meetings and to manage the project. However there needs to be greater understanding of where and when the arts officer is best used to represent the interests of the artist. In presenting technical matters, the artist is more qualified to directly communicate with the client, whereas the arts officer can assist with legal and contractual details. Ideally, as in Case Study 1, the arts officer has a major input at the start and then leaves the artist to contact the client during the design and making stages.

In Case study 2 it was necessary for the Arts Officer to have a major input as the time scale was so short, however, ideally more direct contact to discuss ideas between artist and client would have benefited the project artistically. In Case Study 4 there was no need for an Arts Officer to be involved as the architect initiated the commission and introduced the artist to the client, building contractors, Clerk of Works, etc.. Once the project was started the Project architect was responsible for managing the project (delivery dates etc.) but left the artist to the making, becoming more closely involved at the final installation stage.

There is no doubt that Public Arts Officers can help to legitimise the position of the artist being the “acceptable face of art” to many clients and are particularly useful when based within local government. This gives a greater opportunity for links to be forged with council officials and people at the forefront of urban development, building programmes and regeneration programmes familiarising them with the possibilities that art can offer.

4.3.2.5 The public/users

The users of the buildings in all four case studies were not involved in the design or planning of the artwork. In Case study one there was one meeting where the staff of the medical centre met to discuss imagery but generally all negotiation was with the clients acting on behalf of the users or residents.

Realistically it would have been impossible to have involved the users as in all cases the buildings were unoccupied at the artwork planning stage. This is in contrast with arts projects which take place where there is an established user/resident group (ref. Nature of Practice section 1.2) where it is essential that there is a degree of consultation or participation if the artist and final artwork are to be accepted or owned. (This point is raised by Miles, 1995, ref. section 2.3.6, p.84)

The degree to which the public can be involved depends on the nature of the site and of the proposed art programme. It is wholly appropriate that pupils should be involved in the design and making of a mural in a school, similarly users of a community centre. It would, however, be unrealistic to involve the public in making a large scale city centre sculpture, although there should be some forum for public consultation. It is now also recognised that the Town art approach of the 1970s, where community groups were encouraged to design and make

artwork under the supervision of professionals, does not produce top quality artwork. More often today the artist is encouraged to make the artwork in consultation with the public.

The Case Studies highlighted the potential problems of 'ownership' of an artwork by residents/users. As stated, prior consultation was impossible and indeed, the consensus on completion (from the clients) was that there would have been little to be gained from public consultation or collaboration. (The clients after all had not consulted users about the buildings design but worked from there experience.) However in three out of the four cases the artist was told after completion that whilst the users/residents were pleased with the work, they "did not understand the work" and would have appreciated some written explanation alongside.

This raises the question "What do the Public expect from Public Art?" It is not clear from these four case studies whether the users/residents were genuinely confused about the artwork or intimidated or expected that there should be some profound 'meaning' contained within them. It may be that the artwork, being designed to be more ornamental than making some kind of referential statement, was too simplistic and people could not simply respond to it on an instinctive or surface level. In general, however, it would seem to suggest that some consultation with the residents/users if possible, even notification in local newspapers of the artist's proposal would have been beneficial, particularly in the types of buildings where people have to live with the artwork.

4.3.2.6 Summary

- As an overall assessment, the strongest collaboration occurred between architect, artist and client in Case Study 4 .
- Where the commission was of longer duration (Case Studies 1 and 4) there was more opportunity for closer liaison and discussion of ideas before starting to make the artwork.
- The involvement of the architect in the commissioning process had many benefits for the artist: earlier involvement, opportunity for the artwork to be better integrated in the building design, closer collaboration and communication with the design team, strengthened the artists position.

4.3.3 ARTIST'S RESPONSE (ref. Table 4.3)

This section reflects on the four Case Studies from the perspective of the artist/researcher. It compares and contrasts the four commissions and examines the appropriateness of the art works in terms of imagery, design approach and materials in relation to the specific sites and requirements of the design briefs.

4.3.3.1 Nature of the artwork

All of the pieces of work produced in the Case Studies were site-specific architectural ceramics. They were designed in response to a design brief and were primarily designed to be ornamental rather than informative, commemorative or figurative, or having any specific function, other than to enhance the buildings in which they were sited. In being site-specific they contained references to the purpose of the building or its history. Only the artwork produced in Case Study 1 was free standing (Case Study 3 was suspended) combining materials, brick and clay, and making methods, carving and construction. This piece was also designed to have the function of a container for plants.

4.3.3.2 Imagery and source material

In all the Case Studies the imagery was developed from initial suggestions by the clients. These were generally very unrestricted and made allowance for the artist to develop designs and make aesthetic judgments freely. The suggestions made by the clients in the artist's briefs all required the imagery to be site specific and followed a number of broad themes:

- the history of the area
- current use of the site
- geographical references
- symbolic images associated with the clients' profession
- the role of the building

ARTIST'S RESPONSE	Case Study 1	Case Study 2	Case Study 3	Case Study 4
Nature of artwork	Freestanding, decorative, symbolic. Functional-containing plants.	Decorative, non figurative. Incorporated into curved boundary walls as part of longer fencing.	Non functional, decorative, hanging, tensioned from winch. Site-specific. Modern materials	Decorative, functional sundial, references to historical ornament, history of site, symbolic
Design Process	Development in response to client's brief and site requirements. Drawn proposals, plans & specs.	Some drawing. Images derived from previous work. Proposal rendering. Design during making	Drawings, models, tests with materials suggesting form & texture	Drawing, sketches photography, tests design specs.
Source Material	Symbolic images associated with trees, healing, growth, medicine. Stylised and illustrative	Trees, foliate forms. Relief carvings in architecture	Images & pattern derived from details of buildings & history of Carlisle & site	Derived from historical use of architectural relief, sundials, glazed brick, faience, clients' logo
Materials/ making process	Carved red brick base. Hand built (coiled) stoneware. Stoneware glaze and oxides	Low relief carving in buff brick.	Cast porcelain & T material panels. Print & embossed images. Aluminium frames & bearings.	Carved brick, pres-moulded stoneware, earthenware glazes. Forged, fabricated metal
Installation	Brick- mortar, pointed with coloured mortar. Tree on breeze block base, Roman joints and mortar	Mortar. Installed by bricklayers on site.	Suspended from winch by steel cable, tensioned middle & base. Panels bolted together	Installed by builders- mortar, steel wall ties. Sundial with resin anchor bolts
Documentation	Photography of making process, designs, tests, completed work. Site plans & drawings. Visual diary	Little, some photography of making. Completed work. Diary	Photography of work in progress, installation and completion. Drawing and notes	Extensive photography of making, installation, completed work. Diary.
Appropriateness of artwork	Appropriate use of imagery could have been more refined and detailed. Material appropriate	Means of integrating ornament appropriate. Imagery less site specific	Ceramic not appropriate for site although overall work suited to structure and light of stairwell	Most appropriate use of material and integration of art into building brick details

Table 4.3: The artist's response

The prevalent theme was that of historical references associated with the local area and the site itself. In section 2 the sources of imagery in contemporary architecture was examined with the overall view that whilst historically such ornament was associated with the church or state, this is no longer applicable. The search for universally recognised and site-specific theme invariably falls to references to the past as the most obvious choice of source material, and although a rich source when properly researched, it is not always appropriate.

All four sites in the Case Studies were located in the North of England, a once flourishing area associated with mining and ship building amongst other valuable industries. The most obvious source of imagery would be associated with these professions, however, in Case Study 4 the clients requested that the imagery should not be related to the mining industry as they felt that this was too much of a cliché. Instead, they requested that the main part of the artwork should be decorative and incorporate their company logo. Although this theme initially sounded particularly uninspiring, it does follow the historic use of architectural ornament incorporating the owner's/patron's crest or profession. Similarly in Case Study 1, the theme chosen by the clients was imagery associated with the medical profession although it was felt to be important that the artwork should make some reference to the area. (This was achieved through the choice of materials rather than as a literal representation).

Both Case Studies 2 and 3 were based on imagery associated with the history of the site and locality. Whilst a historical theme was appropriate and site-specific, they both proved that it is necessary for the artist to have a clear idea of which aspect in such a broad area to concentrate on. In researching the source material, a personal approach or interest in the subject matter will invariably strengthen the designs. This is where a strong

private practice and sense of personal identity and imagery becomes important, enabling the artist to maintain integrity, and therefore quality, in commissioned and collaborative art projects.

Although all the commissions contained elements of the artists/ researcher's imagery, it was in Case Study 4 where the artist's brief was fulfilled with least compromise to artistic integrity.

4.3.3.3 Design Process

Some of the differences in the approach to design in commissions and private (studio) work have been highlighted in section 1 in respect to the artist/researcher's art practice.

The design process in each of the four Case Studies generally followed a similar route and key stages (identified in section 3):

- research into imagery and source material
- initial designs
- first proposals
- research and tests on materials
- modification of designs
- finalised design proposals and specifications

In practice, the time given to these stages and whether they were all followed depended on the total duration of the commission. In Case Study 2 the commission was so short that the initial proposals were approved with only minor modifications, no design specifications required and only rudimentary testing of materials and firing temperatures. The designs of the second and third walls were developed from the first and mostly during the actual making of the work. The client had requested that the nature of the designs be similar in character and quality to that in the previously completed commission (Case Study 1), although the imagery should be different. This was not an ideal

way to approach the commissioning or design of site specific artwork and illustrates the danger of imagery becoming stale and repetitive if there is not enough time spent developing fresh ideas between each commission.

In Case Studies 1 and 4 there was sufficient time for the imagery to be well researched and developed with discussion and approval off the client. In both cases once the client approved initial designs, the modifications and finalising of designs was left up to the researcher. Also in both commissions an architect was involved (to a greater or lesser degree) and required design specifications detailing the technicalities of materials, making and installation before the making went ahead. This required the artist/researcher to approach the design in quite a different way to that in the private practice, ensuring that all details were formalised and complete before starting to make the artwork, rather than leaving room for development in the making stage. In Case Study 4 the artist/researcher was expected to have the technical aspects of the design process approved at a number of stages, by client, clerk of works and architect, but was allowed relative freedom in the design of the imagery.

Fundamentally there was little difference between the approach to design (in terms of development of imagery) in the commissions and in the studio work. The main method of accumulating source material was through photography and the compilation of images (library sources, photocopies, magazines) generally relating to the theme of the commission. Instinctively these tended to become directed towards areas of personal interest, with the result that all the commissioned work contained recognisable elements and characteristics contained in the artist/researcher's practice. This highlighted how the individual approach of artists responding to a design brief affects the final outcome, that when a client chooses one artist

above another, they are responding to a particular character in the work, as much as the ability of the artist to carry out the commission.

Where differences of approach occurred was where it was necessary to take into account particular requirements of the client (physical and aesthetic) and make the design process explicit. In the artist/researcher's studio practice the whole process of design would be speeded up with most of the modification of designs occurring through the making process. In Case study 1, although there was ample time for design, there was a danger that the designs might be compromised as the wishes of all the medical and nursing staff was taken into consideration regarding the nature of the artwork. This was essentially due to the lack of confidence and experience on the part of the artist/researcher and underlined the importance of an artist to have a sense of their own visual identity, style and approach before undertaking collaborative work.

It has already been observed in the time scales that the greatest time in the commissioning process was negotiation. Similarly, in the design process there majority of time was spent discussing designs and modifying these designs. Zeisel (1994) illustrated the various stages of negotiation, design, making and installation as a spiralling form in an attempt to highlight the repetition, reflection and modification of ideas that invariably occurs during the design process. This model is probably more appropriate than a linear diagram in trying to pinpoint the nature of the design process. In all the commissions the design process started from a broad base of ideas and was gradually refined into the finished artwork.

4.3.3.4 Materials and making

It became apparent over the course of the four commissions that it was only possible to take the designs to a certain stage of resolution before starting the making process. It was necessary, therefore, for the designs and specifications to reach a stage where the client will have confidence in the ability of the artist to carry out the making and complete the commission. All the commissions involved learning about working with ceramic on a large scale and with carved brick during the process of making. There is no doubt that the artist/researcher's skills in carving brick improved from Case Study 1, where the carving was relatively crude, to Case Study 4, where the carving was much more refined and three dimensional. Every commission involved a different set of requirements, approaches and skills and, although increased experience of the material enabled the artist to approach the next commission with increased confidence, it did not prepare the artist/researcher for every eventuality.

In all but Case Study 3, brick was the main material used. In Case Study 1, it was the most appropriate material to combine a function (as a container for plants) with ornamental detail, enabling the design to be integrated directly with the walls. In Case Study 2, it became apparent that carved brick was again the most appropriate way to easily introduce ornament into walls, resulting in an artwork that was permanent, weather proof and resistant to vandalism, as it could not be detached. As mentioned in the previous section, much of the design development in this commission occurred in the making stage and in reality some modification of designs invariably occurred in the transferring of designs to material and three dimensional realisation in all the case studies.

The approach to carving the bricks was different in each case study. In Case Study 1, standard bricks were constructed into walls, in Case Study 2, the bricks were laid out on the studio floor and in Case Study 4, larger blocks of clay were similarly laid out to the required size area before carving. The material itself brought a particular character to the designs and was particularly responsive to flowing lines and organic relief carving. The disadvantage to the material was the loss of the rich voluptuous quality that existed in the wet clay when it dried and split into individual bricks. As with ceramic generally, this was these least attractive stage of the artwork, relying on firing and glaze to restore its quality. In Case Study 1, although the quality of carving was relatively poor, the red brick colour enhanced the contrast of the relief much better than in the buff brick of Case Study 2. In Case Study 4, after the first firing the pink/buff colour had totally flattened any effect of relief carving necessitating the use of oxides and glaze to restore the depth of pattern and contrast in the design. The problem with making organic form in brick was that the design was broken up by the shapes of the individual bricks, it would be more appropriate if non standard tessellating units could be produced in keeping with the design. This problem was to some extent solved with the use of a coloured mortar.

A number of potential problems involved with working in clay on a large scale emerged during the course of Case Study 1 and also in the studio work. This was both due to structural problems: supporting of weight in firing and preventing warping and cracking, and also visual changes in proportion and quality due to shrinking: with an average shrinkage of 12 %, this made a considerable difference in a large scale piece. The shrinking of the clay also tends to distort forms on a large scale so that what may have looked precise before firing can end up looking messy when fired, likewise a very organic form can

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'straighten out'. These are all reasons that contributed to the decline of use of ceramic on a large architectural scale as it became too expensive to build contingency into a large contract.

Case Study 3 was the only commission where brick was not used, with slip cast porcelain in panels made instead. This was a distinct change in direction both in terms of choice of material and approach to making. Due to the lack of familiarity with porcelain, the artist/researcher spent a great deal of time testing the material with a high proportion of failures. It was probably unwise to experiment with an unfamiliar material in a commission, particularly on a short time scale, and should instead have been experimented with before to ascertain its technical limitations and to experiment more fully with its potential artistically.

The production of large scale, site-specific ceramic in a studio situation, rather than industrially (as in the past) was possible without an excessive amount of specialist equipment (section 2.1: King 1990). Certainly access to large kilns and spray guns for glazing was a help, but it would not have been impossible with a smaller kiln. The main necessity for a large kiln was to allow sufficient air around the bricks in firing to allow efficient burning of carbon (ref. technical appendix) with good ventilation and extraction essential to remove sulphur fumes. It also decreased the possibility of variation of firing temperatures, and therefore colour response, by firing main sections together rather than in multiple firings.

4.3.3.5 Installation

In all but Case Study 3, the artwork was installed by builders on site. There was a degree of reluctance to do this at first, owing to the fact that the builders had a fairly conservative idea as to how brickwork should be used and laid. It appeared that bricklayers are no longer taught to install decorative terracotta or to use

joint of less than 10mm or lime mortar, all of which would have been commonplace in the 19th century. This was partly due to economics: using less brick through larger mortar joints and the rarity of decorative brickwork and terracotta today. In Case Study 1 the brickwork was badly installed but in the other commissions where brickwork was used, the installation was satisfactory. Case Study 4 presented the most difficulty due to the weight of the work and as there was no proper bond in the brickwork. Here a combination of bolts, wall ties and mortar was used to good effect. Case Study 3 was simply installed by the artist/researcher with assistants, having been designed to be suspended from steel cable.

The commissions drew attention to the necessity for the installation to be very well planned in the design stages to prevent unnecessary, cost, time and potential danger. Particularly with very large works or those sited in areas with a risk of vandalism, the artwork must be extremely secure. Interestingly, it was only in the commissions where architects were involved that the artist /researcher was required to give a detailed account of the installation method.

4.3.3.6 Documentation

The favoured way to document the commissions was through photography (slide and print) at each stage of the making process. The design process, being paper based, was by its nature a visual documentation of the development of ideas. Details of glazes, materials and making along with key stage meetings were recorded in notes and diary form. Apart from noting glaze details, it was previously not part of the artist/researcher's usual practice to record procedures in detail although the documentation process became more thorough by Case Study 4. This is symptomatic of the way that ceramicists and sculptors generally work, retaining information mentally and conveying ideas through word of mouth rather than writing

it down. It is becoming a common, however, that the artist is required to submit progress reports and documentation at the end of commissions.

4.3.3.7 Appropriateness

During the course of the four case studies it became apparent that brick was a highly appropriate and effective means of introducing art/ornament into architecture. Emerging out of carrying out the commissions was the fact that, being site-specific, the artworks were generally appropriate for their sites but would have been unlikely that they would be anywhere else. In designing an artwork for a particular place, the subject matter is not the only consideration in making the work site-specific: the scale, colour and proportions relative to the site must be considered. Case Study 4 illustrates this point, being large scale, highly ornate and colourful, it seemed unlikely at the design stage that the artwork would be appropriate for a modern sheltered housing scheme. In reality the work was an affective visual focus for the building with the colour of the glazed bricks highlighting and reflecting colour in the brickwork that might otherwise have been unnoticeable. It was generally agreed, however, that such a work would be highly inappropriate in another building.

4.3.3.8 Summary

- All the artworks produced in the Case Studies were site-specific ceramics for architecture.
- Although basically non-functional in a conventional sense, all the works combined the decorative and functional aspects of ceramic (being permanent, weatherproof)
- The main function of the artworks was as ornament to enhance and create a visual focus in architecture.
- The design process differed from private practice in that it was in response to a clients requirements.
- The design of the artwork had to be transparent for the comprehension and approval of the client and/or architect.
- The type of source material compiled was largely influenced by the artist's personal interests and imagery.
- The finished work naturally contains the hallmarks of the artists style and approach to design.
- The continuation of an artist's private practice alongside commissioned work helps to maintain quality and integrity in the commissioned work.
- Ceramic, and in particular brick was the most appropriate material for all commissions except possibly Case Study 3.
- Carved brick appears to be a highly appropriate way to integrate ornament into architecture.
- The disadvantage with brick arises from the mortar joints and brick units breaking up areas of pattern- units designed in keeping with the design would be more appropriate, if possible.
- The installation of the artwork must be thoroughly planned at the design stage to prevent unnecessary safety risks and time wasting.

4.4 RESPONSES TO THE COMPLETED WORK

(See Table 4.4) The responses to the commissions were collated at the end of the completion of the four Case Studies. This was in order to establish an appropriate approach to gather the information. As outlined in the main introduction (4.1) and methodology section, it was not considered appropriate in this research programme to undertake a large scale survey or detailed questionnaire as this would have dramatically changed the emphasis of the project. This type of approach would be more appropriate in a Social Science project where, for example, a general view of the public on Public Art may be sought, and has been the basis of other research (Selwood, 1995; Miles, 1995)². The emphasis of this research lay in examining the artist's perspective on collaborative art in architecture projects and so responses to the commissions were mainly confined to those comments from key participants in the collaboration.

A feature of all the Case Studies was the difficulty in eliciting critical comments regarding the work. In general all the artworks were well received with any criticism directed toward technical issues and typically the comments reflected the particular perspective or specialism of the person. Therefore, the architects commented mainly on technical matters, the arts officers on the collaboration or commissioning process, the client on the meaning of the piece and its affect on their building.

Although basically the same questions were asked, discussion did slant towards the specialism of the interviewee in order to gain specific information.

RESPONSES	Case Study 1	Case Study 2	Case Study 3	Case Study 4
Artist	Use of brick appropriate for base.'Tree' Could have been more detailed in surface and content. Need for closer collaboration with architect	Artwork too 'last minute' for thorough design-ideas formed in making. Labour intensive. Surface & colour limited due to time	Ceramic not most appropriate medium for site. Unfamiliar materials and way of working. Use of colour a mistake.	Very good communication with architect. Plenty of design/making time. Scale, glazing a challenge. Funding minimal
Architect	No response to completed work. Interested, however, in use of brick in architectural art.	Not involved in commission and no response given on completion.	Enthusiastic about the stairwell design and incorporation of artwork. No response after initial site meetings	Good response, highly enthusiastic. Confidence in including artist as specialist. Would include art in future projects.
Client	Generally happy with work. Requested visuals explaining making and design process for staff & patients	Happy with work& felt it had brought identity to the housing development. Helped decrease chance of vandalism of walls	Development officer pleased with result. Generally felt to be appropriate to site-relating to metal & glass.	Pleased with work although surprised at the large scale. Felt it gave identity to the building and quality for residents.
Arts Officer	Supportive client. Closer collaboration needed with architect & client. Visual effect reduced by clashing floor & wood	Pleased with work-felt it appropriate to site. Acknowledged shortness of time. Less happy with lack of surrounding planting	No Arts Officer involved. Project manager left before completion and had little input in stairwell project.	No arts Officer involved as project set up and managed by the architect.
Public	Good response from medical staff who reported interest by patients. Imagery and material used not fully understood.	Residents of house next to wall 2 delighted. Felt it brought character to the estate. Passers-by interested and impressed.	Users of the campus; porters, cleaners, staff interested. Some concern over H&S & cleaning	Very good public response and interest in the making, materials and the content of the work.
Conclusions	Different agendas. Generally well relieved but staff & public looking for a specific meaning rather than overall impression.	Successful in terms of client/public response even though last minute. However limited in terms of artistic content and design.	Problems arose due to unfamiliarity of materials and awkward site. Good response from client.	The most successful of the commissions , very strong collaboration between artist and architect and integration of artwork.

Table 4.4: Responses to the commissions and conclusions

4.4.1 The clients and users

Typical questions leading to discussion with the clients were:

“Would you consider the artwork to have been worthwhile commissioning: in terms of its input to the building?; in terms of its cost?”

“Would you consider commissioning an artwork again for another building?”

All the commissions were deemed to have been worthwhile both in bringing a unique feature to the building and financially. The clients appeared to realise the amount of time and effort that had been invested in the commissions, although this was generally more than they had first thought. This would suggest that it is important that the artist has enough knowledge to realistically estimate the timescale of a commission and to be able to present this to the client at the earliest stages. This would ensure that the client is aware of exactly how much work is involved and, particularly with clay, how much time is spent preparing, drying and firing the material.

None of these commissions led to further work, although the clients appeared to be willing to consider incorporating artwork into future building projects. Their main reservation, however, was due to the cost of such projects. The Housing Officer in Case Study 4 suggested that in future projects smaller details might be a more financially viable way to incorporate art and design. The overall opinion, however was that it was important that the artwork be appropriate, both to the site and to the clients and residents' requirements.

Regarding the appropriateness of the material, the fact that the pieces were ceramic or brick did not appear to matter. There was some concern raised in the early stages of all the commissions that ceramic might be easily damaged, but certainly the use of brick allayed these fears as it was seen to be a functional

material as well as being easily installed. That ceramic is unsuitable for architectural ornament or even to be sited outdoors seemed to be a common preconception which may stem from seeing badly damaged terracotta on Victorian buildings or tile work on those from the 1960s. It is difficult, therefore to convince a potential client that ceramic is appropriate when there is no way of predicting how it will look in 100 years time. Surprisingly, feedback from the residents/users and staff in both Case Studies 1 and 4 revealed that they did not know what the pieces were made from, and although they were interested in how they were made, this did not seem as important as knowing what the imagery referred to. Perhaps this indicates that the choice of the material and making method is only of importance to the maker or the architect even though in these cases the choice of brick was tied in with its associations with the coal industry.

4.4.2 The architects

Questions put to the architects were more directed towards their views on the role of art and ornament in architecture, the choice of ceramic as a suitable material, the appropriateness of the artwork to the building and the means by which it had been introduced into the building plan.

In Case Study 1, the architect was unavailable for detailed questioning, however the project architect expressed an interest in the use of carved brick as a means of integrating art into architecture during the installation of the piece. The most useful comments were received from the architects in Case Study 4 as they had been closely involved with the commissioning and design of the doorway. Interestingly, the Senior architect and the Project architect had different views on the way the project had run, with the former satisfied that the artist had been introduced at the earliest possible stage; and the latter

suggesting that their should have been closer collaboration earlier to enable the brick to be used both as ornamental detail and structurally in archways.

It became apparent from the comments made regarding the role of art in architecture and collaboration, that the future of a specialism such as architectural ceramics lies very much in the hands of architect. If they have as much interest and vision as this architect in bringing art into architecture, there is great potential for the application of ceramic art/ornament. However, the feeling was that it must be appropriately incorporated, rather than being imposed on the client and architect, which he felt the *Percent for Art Scheme* was in danger of doing and the materials, should be innovative used rather than in imitation of the past..

“Instead art and design should be incorporated imaginatively in features which have to be there anyway, such as door handles or lighting.”

Although all the comments and points raised were useful, the most difficult criticism to elicit was in relation to the aesthetic quality or success of the artwork and its appropriateness to the site. The exception to this was in Case Study 3, where the comment was made that the artwork, although very different from the artist's previous work, was very much in keeping with the essence of the site and building. This was from the commissioning client who had a wide knowledge of art. Similarly, in Case Study 4, the senior architect discussed at length the merits of ornament in architecture and the design of the building and artwork as part of an ongoing tradition of ornament in architecture.

The impression given through speaking to most of the other participants was that there was a certain amount of reluctance to pass an aesthetic judgment on the artwork. It may be that without a training in art or design, several of the participants,

e.g. the Housing Officer and the warden in Case Study 4 felt they were unqualified to comment on the artistic merits of the work. (Conversely and without exception, during the installation of the artworks, comments were freely made by builders and passers-by.) It appears on reflection, that it may not have been relevant to try and encourage artistic criticism from the participants, as they had been involved in the design process, initiating the design brief or suggesting themes. Objective criticism is more often received from people who are not directly involved with the artwork.

The need for criticism and evaluation of Public Art has been expressed by many artists and critics (see section 2) some of which have questioned whether comments from people without arts training having any significance or influence at all. It was a general comment from the architects that building projects would never normally be followed up for responses unless there were major problems. The Housing Officer in Case Study 4 thought that a follow up procedure may be beneficial to them, whereas the architect stated that, beyond the normal six monthly inspection, they were usually too busy designing the next building to go back. Public Art in prominent city centres and large public buildings is open to criticism in the local and national press and in Council meetings with even popular work questioned in terms of its value for money. In less prominent sites the only viewers and critics of the work are generally those immediately associated with the commission or the residents of the building and the work is not usually featured in the press. This does not make the quality and integrity of the work any less important but may explain the level of response. It may be that these types of buildings are fundamentally designed to be used and lived in rather than to be prestigious showpieces which people pass through.

This was a general comment, particularly with respect to Case Study 4 where the Resident Warden, Housing Officer and architect all emphasised their belief in the importance of making smaller buildings, such as sheltered housing, to as high a standard as possible. The Warden expressed the belief that art in architecture is definitely worthwhile and worth the cost when it shows the residents an attention to detail and consideration for the quality of their lives. In return, she stated, the artwork becomes owned and valued by the residents as part of their building, rather than being glanced at or ignored by passers-by in a busy city centre.

4.4.3 Summary

- It was not appropriate to this project to undertake a mass survey/questionnaire after the commissions.
- The responses from the participants came out of informal interviews after the commissions' completion and were only their in
- The discussions slanted towards the specialism of the interviewee
- It was difficult to gauge from the responses the aesthetic merit of the artwork.
- The cost of arts projects appears to be a prohibitive factor in commissioning further
- The commissions were generally considered to be worthwhile, in terms of value for money with their contribution to the building being seen to outweigh the cost.

SECTION 5: DISCUSSION AND CONCLUSIONS

5.1 OVERVIEW OF SECTION 5

This section examines the key points and conclusions that emerged from the research. Although some of these points have already been considered in the analysis of the Case Studies, they are examined here in relation to the original aims and objectives of the research and the structure of the thesis as a whole.

The final outcome of the research is in three parts:

- sited work
- exhibition
- written thesis

Although each of these can be viewed as separate entities, and are to some extent aimed at different audiences, they are combined to form a whole presentation. The thesis as a written documentation of the commissions and context, enables the research to be disseminated to a wide audience of other practitioners and academics. The exhibition is a visual presentation of the artwork produced during the course of the research programme and aims towards peers in art and design, architecture and site-specific art. The sited work is constantly open to public evaluation and criticism by virtue of its location and throughout the collaborative/commissioning process.

Through the analysis of the Case Studies in relation to their historical context, it has been possible to speculate about future developments in the field of architectural ceramics. These emerged as a result of experiencing the process of carrying out the commissions, and formed the basis of suggestions for further work and procedural guidelines for practitioners within the field. This has also shown that the research project, and the artist/researcher's practice, is not an entirely isolated activity but part of a broader context and continuing tradition.

5.2 THE RATIONALE AND HYPOTHESIS

The original rationale for the research was that there had been little research into the processes of carrying out site-specific art projects, particularly from the practitioner's perspective. More specifically, there had been little use of ceramic for contemporary site-specific /architectural embellishment, creating an opportunity for the material to be reconsidered within the context of contemporary public art policies and agendas. From this developed the hypothesis that decorative ceramic was as appropriate within contemporary contexts as in the past, particularly if designed as integral features within building schemes.

From the contextual review, it was possible to see that although ceramics has a centuries old tradition of being associated with architectural embellishment, the use of the material declined dramatically after the end of the second World War as a result of the development of new and more economically produced building materials. The review showed that there is a continuity of tradition between the use of ceramic in the past and in the present, however there has been a distinct lack of its use in modern architecture in the UK. That the research should be carried out from a practitioners perspective as a participant in 'live' site-specific commissions was important as it gave a 'third dimension' to the research project.

5.3 AIMS AND OBJECTIVES

5.3.1 Practice as the basis of the investigation and principle mode of research

As a ceramics practitioner the most appropriate way to approach this investigation was by centring it around the artist/researchers practice. The continuation of private practice, the participation in public commissions, theory and reflection on practice initially appeared to be separate entities. However, as

the research progressed it became apparent that these areas were interrelated and interdependent: theory tested through practice, giving rise to evidence to support theory.

5.3.2 The situating of the practice within a context

The majority of the contextual review centred on the use of architectural ceramics rather than being predominantly about public art. This reflects the nature of the artist/researchers practice which has been largely influenced by historical architectural ceramics and ornament in general, rather than by the history of sculpture. It was necessary also to acknowledge the contemporary context of the practitioner working within current public art policies and agendas.

5.3.3 The examination of the commissioning/collaboration process through participation in live commissions

It was essential that the research project be carried out from a practice-led approach in order to gain first hand experience of the aspects involved in producing architectural ceramics to commission. A purely theoretical approach would have resulted in a somewhat one-dimensional view of the subject with conclusions drawn from secondary sources. Participation in commissions enabled the process of design and making to be examined from the artist's perspective and meant that the evidence supporting key points and observations relating to the commissioning and collaborative process was derived through experience.

5.3.4 Procedural guidelines

The analysis of the Case Studies highlighted several points relating to the commissioning/collaborative process which form the basis of recommendations or guidelines for other practitioners in site-specific ceramics. These are not designed to

be prescriptive, as individual approaches and commissions vary enormously, however they also form the basis of suggestions for future work.

5.4 NATURE OF THE PRACTICE

The nature of the artist/researchers practice has been heavily influenced by historical architectural ornament with regard to imagery and making methods. The development of artwork has involved the learning of making methods largely through imitation of historical examples whilst being situated in the contemporary context of a studio based practice. Whilst it has been important to see this practice as part of a continuing tradition, it is evident that it is necessary to acknowledge the potential of the application of modern technology to what is a predominantly craft skills based practice, if it is to be appropriate in the future.

It is debatable whether highly ornamental imagery is appropriate to modern architecture, however the evidence from the case studies suggests that people respond to this type of decoration. It would appear that it is more important to use the ornament appropriately, in terms of location, proportion and that the work is well executed.

The term architectural ceramics appeared to be somewhat misleading as a description of the artist researcher's practice as it implies something that is entirely functional. In the light of the research it appeared to be more appropriate to describe the practice as site-specific ceramics.

5.4.1 The evolution of practice through research

Through the research process and the Case Studies the artist / researcher's practice developed in terms of the approach to working and documentation methods. This required the art practice to become more methodical and clear, both with the aim of conveying information to other practitioners and of reflecting on and developing the art practice. The carrying out of the Case

Studies gave the opportunity to develop the artist/researcher's practice from a fairly insular activity, to one where the external circumstances and requirements of site-specific work have a major bearing on the artwork. The commissions necessitated the development of a different approach to designing, both in terms of the appropriate use materials and in the development of imagery and form on a large scale. This way of working, offered alternative approaches to working with clay in the future, both in terms of the broader applications of architectural ceramics and also in relation to the development of personal practice. The development of brick and commercially produced building modules have immediate potential for the integration of ornament into architecture. There is also potential for development of ornament that is more delicate or ephemeral, (using porcelain) using the affect of natural light or controlled sources in interior spaces affecting the interplay of light, translucency, colour and reflection.

It would be reasonable to expect that the artist/researcher's practice would develop over the course of a number of years. It is difficult, however, to state conclusively whether the practice was significantly altered by being an integral part of a formal research programme.

5.5 THE CONTEXT OF THE RESEARCH PROJECT

The knowledge that contemporary architectural ceramics is part of a long and continuing tradition has both informed the research project and the artist/researcher's practice. Today architectural ceramics is a branch of studio ceramics practice, involving the artist in all aspects of negotiation, design and production of the site-specific artwork whereas historically it would have been a factory based division of labour. It was found that the ceramic ornament produced in the Case Studies, although referring heavily to historical styles was appropriate to the particular buildings involved.

The role of architectural ceramics has changed: from being a means of introducing ornament into buildings, whilst serving the purpose of a protective cladding, to a medium that is seen as a potentially problematic way of introducing extraneous decoration. The use of architectural ceramics in the 19th century was allied to styles and trends in architecture which are no longer applicable today. In addition there was a predominant use of local clays and manufacturers which brought a uniformity of colour and style that became synonymous with particular areas in the country, contributing to a vernacular style. Current practitioners, in contrast make use of any material that is appropriate to the artwork. (In the Case Studies clay and glaze materials were ordered from Stoke on Trent, rather than being dug from local clay deposits.)

The buildings in which the commissioned artwork was sited were less ostentatious than they would have been in the past, with the ornament used to enhance particular locations within the building. A similarity with 19th century examples was that entrances appear to still be a key area for ornamentation and possibly even more applicable in modern buildings as a visual focus.

The skills of producing architectural ceramics on a large scale production are now all but lost and the onus has been passed onto the studio based practitioner to revive these skills and interpret them for contemporary contexts. Although technical information and guidance was available from brick manufacturers and experts in Stoke on Trent, the process of developing the artwork and appropriate use of the material for the commissions was largely an individual task. The majority of work produced throughout the research programme therefore involved the process of learning about the materials and designing for an architectural scale through imitation of historical examples.

If architectural ceramics is to develop for a wider application in contemporary architecture, the practice needs to develop beyond the studio based individual. The studio artist is invariably limited by scale and equipment and the practice could be advanced through greater collaboration with the ceramic industry and other specialists and the use of technology.

5.6 METHODOLOGY: THE RELATIONSHIP BETWEEN PRACTICE AND RESEARCH.

The basis of the investigation was the participation in and reflection on site-specific commissions. The nature of this type of artwork is that it was designed for and in response to a particular site and every project involved a unique combination of circumstances: participants, funding mechanisms, requirements, approach to design. Through participation, it was possible to experience the combination of these different elements and the complex interpersonal relationships that make up a collaborative project.

The nature of the enquiry; learning within the context of real projects, made the use of Case Studies appropriate. These were structured in relation to the procedures involved in producing site-specific artwork and facilitated comparison between the four projects highlighting key points and leading to outcomes of the research.

The experience of carrying out 'live' commissions showed how, in reality, the completion of a large-scale artwork can be as dependent on the compatibility of the participants' personalities and an ability to negotiate, as on the competence of the artist. In the collaborative projects the artist/researcher's practice was subject to external influences rather than being purely self determined (as in the private practice) with other participants having requirements and expectations of the artwork. The collaborative process gave the opportunity for consultation with other specialists (architects, materials specialists, arts officers) who brought a different perspective to the artwork and any problems that arose. In this way the artwork was constantly

subject to review and criticism throughout the design and making stages, and after completion, by virtue of its siting in the public domain. This contrasted with the 'private' (experimental) work which, although open to criticism in exhibitions, was only generally seen in its finished state and by a limited audience.

5.7 THE CASE STUDIES

Whilst the contextual review focused on the context of the study and its bearing on the artist/researcher's practice; the Case Studies were the primary means of acquiring information on the actual processes involved in carrying out contemporary site-specific commissions. This section focuses on the outcomes and key issues that emerged as a result of carrying out the Case Studies. These concentrate on the practical aspects of carrying out the commissions and give rise to the procedural guide lines for other practitioners in architectural ceramics.

5.7.1 Commissioning process

The consensus of opinion (ref. Section 2) regarding the commissioning process is that the artist should be involved as early as possible in the building programme to ensure that the artwork is compatible with the building design. Due to the nature of the material, the manufacture of large scale site-specific ceramic features requires thorough forward planning to allow enough time for successful manufacture, firing and installation. Whilst it is certainly possible to install ceramic panels after the completion of the building, it is imperative that there should be consideration given to how exactly this will be achieved without resulting in an incongruous design, fit, or damage to the ceramics.

It is a advantage for the architect to be involved in the commissioning process in order to exploit the potential for integrated ornament and appropriate use of the material to be exploited to the full. The experience of the Case Studies showed

that where an architect was involved fully in the art in architecture project, there was a greater opportunity for the artwork to be considered as an integral and significant part of the overall building design. This also facilitated good communication with contractors enabling the artist to be accepted as a legitimate part of a 'design team', as opposed to an obstacle to progress of the building programme. It was noticeable that in the Cases where the architect was not involved, there was less cohesiveness to the project, particularly at the initial design stage and at the final installation of the artwork.

5.7.2 Funding and contracts

The emphasis that has emerged from the research is on the importance of integration of the artwork into the building structure and on collaboration. In terms of both its aesthetic merit and practical aspects (being most resistant to damage) the ceramic was most effective when integrated into walls, either as large areas of relief or to introduce discrete areas of intense colour or ornament. The integration of this artwork depends on the willingness of the architect to collaborate with the artist to ensure the design and use of material is appropriate and the artwork becomes an integral part of the building. In turn, the client must also be willing to consider the inclusion of artwork into the new building and to either allocate a proportion of the total budget to the project or, preferably, to enable the artwork to be considered as a necessary part of the building and included as part of the capital materials budget. In the light of the research it can be concluded that Percent for Art is not an appropriate way to fund smaller art in architecture projects as it represents an unreasonably large proportion of the building budget. There is no real incentive for it to be adopted and clients are unwilling to allocate this amount (which they see as imposed) to art.

5.7.3 Collaboration

It could be argued that the artist and architect must both be prepared to compromise their designs to some degree in a collaboration. This is a negative view and takes away from the notion of collaboration as a working together toward a common goal (the whole being more than the sum of the parts). In reality it is unlikely that a strictly 50-50 collaboration between artist and architect would occur other than in a privately commissioned (experimental) building (ref. Section 2- Jenkes' Thematic House). In buildings such as those in the four Case Studies (where the budget was a prime consideration), the optimum situation for an artist is to be invited to participate in decisions regarding the nature and position of artwork, and to be allowed freedom of personal expression.

5.7.4 Materials, making, installation

From the Case studies it can be concluded that ceramic was an appropriate material for all the commission with carved brick particularly successful; being easily integrated into building designs and economically installed. There was generally less uncertainty over the strength and reliability of brick than ceramic panels. This was probably due to a familiarity with the material's use as a functional building material as opposed to the assumed fragility of pottery or badly damaged terracotta in old buildings. The reluctance of architects to use ceramic was based on this association and it being "old fashioned", along with the perceived high cost and labour intensiveness of producing architectural ceramics.

Significantly a number of responses after the completion of the artwork suggested that there was little concern about what the artwork was made of with more emphasis placed on the actual quality of imagery and meaning. This would suggest that there are different attitudes to the use of ceramic; architects being concerned over the durability of the material and its appropriateness within the specific building; clients being

concerned about cost and again by durability; with the users/ residents priority lying with the quality and appropriateness of the imagery.

5.7.5 Design and making process.

The most successful pieces were those that were wall based as they did not rely on any great strength in the material and being integrated into a wall they would be virtually impossible to remove and damage. Aesthetically ceramic was found to be most successful when used in this way; being used as decorative highlights, introducing colour and different texture into otherwise featureless walls.

One of the most difficult aspects to working large scale was in transferring small plans to actual size. In particular the translation of colour from small glaze tests to large areas was a potential problem. There appears to be no satisfactory way to predict how coloured glazes will work on a large scale other than to run extensive tests and through experience.

It was essential to maintain the 'private' art practice throughout the making of work in the Case Studies: producing work for exhibition, experiment and as tests of form, scale and making method. This work was found to maintain an interest in compiling source material and introduced fresh ideas that filtered into the commissioned work. It was found in Case Study 2, especially, that in a quick turn around of commissions it is difficult to research appropriate imagery and consequentially to maintain a level of quality and integrity.

5.8 GUIDELINES FOR OTHER PRACTITIONERS

These guidelines are based on the findings from carrying out the Case Study commissions. They are not intended to be prescriptive as every commission involves a different set of circumstances (as this research shows). They relate not only to the outcomes of the research but also raise issues that may be investigated further in the future.

- **Commissioning:** it is an advantage for the architect to be involved in the commissioning process as this the opportunity for close collaboration and for the ceramic to be included in an appropriate way.
- **Funding:** Ceramic and particularly brick can be effectively included in the materials budget which ensures the material is seen as a necessary part of the building.
- **Contracts:** Artists should not be included as a subcontractor as this means they cannot be paid until the buildings completion.
- **Collaboration:** The contemporary studio practitioner is expected to be able to address all aspects of the commissioning process along with making the artwork. However, in large scale work it is better work in collaboration with the architect, client, arts officer and other specialists in order to achieve a good result. This depends on:
 - **Good communication:** All parties must be aware of deadlines and of each others roles.
 - **Planning:** The successful integration of art into architecture requires excellent planning and cooperation from all parties involved to prevent later mistakes and misunderstandings.
 - **Imagery:** It is important that the artists proposals are not compromised by considering everyone's suggestions and preferences. The continuation of private practice alongside commissioned work reinforces the artist's sense of identity which feeds into the public work maintaining quality and integrity.
 - **Material:** Many clients are reluctant to use ceramic, believing it to be a fragile, costly and unreliable material. It may be possible to use the historical precedent of the material to show how it has been successfully used in architecture. Brick has the advantage of being immediately associated with a reliable building material that is easily incorporated into the building plan.

- **Methods:** The material should be used in an appropriate way both in terms of the location and the imagery. The process of making large scale work there can be laborious and so there may be advantages to using commercially produced materials and mechanical processes, rather than attempting to adapt a craft process to a larger scale.

5.9 SUGGESTIONS FOR FURTHER WORK

As with any area of study, there were a number of different routes that the research programme could have followed but, whilst related, these would not have been entirely relevant to the original aims of this particular research. These were to examine the collaborative process in the application of architectural ceramic in contemporary architecture. Also due to the relative inexperience of the artist/researcher in making large scale site-specific work, and within the available timescale it would not have been possible to have addressed every issue regarding architectural ceramics or site-specific art.

In drawing the conclusions, however, three main areas emerged which would further this research and work in the field and are of particular interest to the artist/researcher:

- Collaborative projects by artists and architects
- Liaison with industry
- New technology

In addition, it was possible to reflect on one's art practice and how this will continue beyond the research programme.

5.9.1 Collaboration

An important outcome from this research and a point repeatedly raised in the overview of literature was that it is important to have close collaboration between artist and architect. Several writers (section 2.2) have referred to the historical practice of the architect integrating art and architecture as a matter of course. It is possible that students of art and architecture should have

more joint programmes and projects in order to foster a collaborative ethos from the earliest education stages. Several major conferences and exhibitions over the last decade in the US and UK have centred on artists and architects discussing Public/Site-Specific art. It would appear, therefore, to be a natural progression to establish a collaborative research project with an artist and architect examining art in architecture through carrying out a series of 'live' projects. This may serve to dispel any prejudices and misconceptions that exist between the two disciplines and would aim to establish a means of integrating art that is appropriate to modern architecture and benefiting both fields. It would appear that whilst art and design are welcomed in small scale "community" / regenerative programmes and also in very high profile buildings there is no middle ground which comprises the majority of architecture.

The teaching of the crafts over the past 25 years has centred on the training of students to be self sufficient designer/makers. This has had the result of producing large numbers of skilled graduates in ceramics, glass and metalwork who are studio based. The experience of the artist/researcher in this project was that it was necessary to be able to not only design and produce the artwork but to communicate with all parties involved in their 'language'. The Case Studies involved relatively small scale work, however in larger projects it would be more efficient if the various areas in the commissioning and production process could be undertaken by a number of specialists rather than by one artist. This would necessitate a decision to incorporate artwork to be taken at the earliest possible stages of building design to enable the artist, architect, client, arts officer and any specialist manufacturers to be fully involved

5.9.2 Liaison with Industry

The aim of the artist developing links with industry (heavy clay, brick) would be to take advantage of the technical expertise and develop designs (modules) which could be produced on a

commercial scale. This potentially could benefit the industry by diversifying its range of products and services; architects by increasing the range of decorative architectural ceramic products; the artist by broadening the range of outlets and scale and type of work.

If ceramic is to compete with modern materials it must be seen as appropriate to modern architecture in terms of its physical and decorative qualities. The use of extrusion coupled with computer aided design systems has been experimented with to a limited extent in the US (Rastorfer, 1989) through artists and architects collaborating with industry to produce extruded or moulded ceramic modules and units. It would appear that the reluctance to use ceramic that still exists in modern architectural practices may be alleviated if a way of economically producing ceramic ornamental systems were available, along with a greater knowledge of the potential application of the material.

5.9.3 The application of technology with relation to architectural ceramics

This research project occurs at a time when computers are starting to revolutionise all areas of research and is already becoming a focus of research projects in its application to Art and Design practice. Whilst being aware of its possibilities, the application of this technology has not been a primary issue in this investigation, other than being a useful means of compiling and documenting information. Towards the end of the research, however, it has been increasingly apparent that there is potential for this technology within the fields of architectural ceramics and site specific art but that which will undoubtedly play a major part in developing the potential and application ceramics in architectural ornament in the future.

Within the field of Art and Design it is being embraced as a way of easily creating sophisticated three dimensional designs and for presentation. There are fears by some that computers will

usurp the role and traditional skills of the artist, but essentially it is a tool with the potential to extend the artist/designer's vocabulary.

- **As a design/ making tool**

In relation to architectural ceramics, the use of computer technology has many possibilities which could extend its possibilities and application in contemporary architecture. An outcome of this research (which could only be reached through the actual making of artifacts) was that carved brick is entirely appropriate to the making of integrated architectural ornament. Although the use of units is an ideal way to build large forms and panels the shape of the brick itself is not necessarily the most appropriate form for the design or image. The organic forms or fluid lines occurring as an integral part of the artist/researcher's "visual language" and imagery were broken up in a manner totally unsympathetic to the nature of the designs. At best the use of coloured mortar to some extent concealed the joints but it would have been more appropriate to have been able to use units shaped in keeping with the design or that might be tessellated in order to build up large areas of pattern.

In general the process of carving bricks on any large scale was time consuming and laborious. For large areas of repeated relief pattern, it would have been far less labour intensive if this could be formed mechanically. Experimentation with cast metal die plates for pressing into solid wet bricks to produce a relief design produced partially successful results. The plates, however needed to be highly accurate (possibly CNC milled rather than cast) to prevent tearing of the brick surface or a large amount of hand finishing.

Subtle repeating patterns could be easily designed and transferred into colour separations for screen printing, creating both large and small, discrete areas of pattern and imagery for the interior and exterior of buildings. The illusion of depth could be incorporated which would remove the possibility of relief work being climbed on. This combined with refractive and reactive glazes (lustre, crystalline) could create a pattern which would visually change in differing light conditions.

It is possible that the use of computers might change the nature of designs produced; possibly developing a new kind of aesthetic. The future for architectural ceramics, and ornament generally, lies with a development of a visual language which is appropriate to the late 20th century and 21st century rather than constantly drawing from past styles. It is important, however, to retain the artist and art practice as the primary instrument for researching and developing designs and imagery.

- **As a presentation tool**

The use of computers to present 'papers' in conferences and seminars is becoming more common and has the advantage of the speaker being able to demonstrate complex points using moving diagrams and models. In many ways the use of computers is more appropriate for presenting research in art and design than the more traditional paper based version. It allows the artist to show, for example, the overlapping stages of a commission; the building process and developments from source material. In the case of this research it would have been useful to have been able to illustrate the design/making process or timetable of the commissions in an interactive/animated form which would more easily show the passage of time or the building of forms. In site-specific art proposals it is possible not only to superimpose proposals onto the location but to demonstrate how differing light conditions, change of scale and materials would alter the piece. There is a danger, however, of giving the client too much choice which could result in confusion and a compromised design, much in the same way that too many people choosing may result in "design by committee".

	Late 19th century	20thC.(Case Studies)	Future work / guidelines
Commissioning Process	Artists occasionally commissioned by architects/ceramic manufacturers for specific designs	Artist should be brought in as part of design team. Involvement of arts officer for liaison between artist and client	Greater involvement of architect in process and introduction of artwork as an integral part of the building design
Funding & Contracts	Private patronage, wealthy building owners, commercial, state, Church	Commercial sponsorship, % for art-local government, educational establishment, housing authority	Integration of art/design features into main budget as necessary features of building/space.
Site- location of the artwork	Civic buildings and commercial/business headquarters, city squares	Public buildings with specific users, community architecture, New buildings and redeveloped city centres	Public spaces and New buildings. Wall/floor based
Nature/role of artwork/ ornament	Signage, Public monuments, ornamentation, status symbol. Educational/moral	Visual focus integrated into building. Enhancement of building. Quality of life. Urban regeneration.	Details integrated into the fabric of buildings, pavements etc. Enhancement of architecture.
Maker	Factory based hierarchy of skilled makers. Artists occasionally commissioned for specialised design work.	Individual studio based artist. Designer/maker/negotiator- responsible for whole commissioning process	Collaboration between makers, technical specialists. Liaison with industry for production on a large/mass scale
Materials & methods	Local materials. traditional craft/skills based methods and division of labour.	Materials and methods used dependent on the nature of the artwork. Mainly traditional skills based practice. Eclectic	Use of computer for design of shapes/images/modular building systems. Use of existing building materials
Imagery	Related to the role of the patron or building. Status symbols/signs. Related to architectural style- eclectic, revivalist	Site-specific. Related to history/geography of site, use and residents. Eclectic sources and use of styles	Site-specific. Greater user of CAD. Tessellation/repeated pattern. Use of light and glaze/relief image
Collaboration	Artists/craftsmen incorporated into hierarchy & working with architect	Some collaboration between client, architect and artist. Artist commissioned too late to be fully part of a 'design team'	Greater collaboration between artist, specialist makers, architect. artist introduced into design team to enable better integration of artwork.

Table summarising conclusions and showing the continuity of architectural ceramics from the past to present

5.10 CONCLUSIONS

There has been little research into the contemporary application of ceramic ornament in architecture, particularly from a practitioners perspective. The practice-led approach to this research project played a vital role in revealing the processes involved in collaborative site-specific art projects. This offers an alternative perspective to previous studies, and thereby demonstrates how ceramic ornament can be successfully integrated into contemporary architecture.

Ceramic bricks were found to be a particularly useful working material for integrated ornament providing a common language between ornament and architecture, artist and architect, and will be a means to forging stronger links between these fields in the future.

The contextual review revealed a strong tradition of ceramic ornament in architecture and the subsequent research has demonstrated that it should continue to be an appropriate way of enhancing public and private buildings. However, if site-specific ceramics is to develop a wider application within the mainstream of architecture, it needs to extend beyond the practice of the individual studio based artist/designer. The studio artist is invariably limited by scale and equipment and the practice of contemporary site-specific ceramics could be advanced through collaboration with the ceramic industry and the application of technology.

This investigation has made an independent and original contribution to knowledge by demonstrating the viability of ceramic as an appropriate material for the embellishment of contemporary architecture. This has been achieved through the adoption and rigorous application of appropriate methodology, and clearly shows, by means of carrying out 'live' site-specific art projects, the collaborative and commissioning processes

involved in producing contemporary architectural ceramics. Whilst this investigation has been carried out from the perspective of one individual artist, this research forms a model of research procedure for other practitioners, not only within the field of architectural ceramics but also within the broader field of art and design research.

5.11 SUMMARY OF THE THESIS

The research arose out of a recognised need for the application of architectural ceramics in site-specific art to be investigated from the perspective of the artist and through art practice.

Most research to date on site-specific art has been carried out from a theoretical or historical perspective. It was necessary, therefore to adopt a research methodology that was appropriate to artistic practice. The methodology adopted involved a multi method approach, acknowledging and adapting aspects from established social science (qualitative) research.

The research was carried out through the participation of the researcher in four commissions for site specific ceramic features which formed the basis of four Case Studies.

The Case Studies followed a common structure throughout enabling comparisons of the key emerging points to be made through reflection in the analysis.

The structure was as follows:

- Background leading to the commissioning of the artist
- The roles of the key participants in the commissions
- The design and making process
- The analysis and evaluation of the work.

It was found that ceramic is a viable material for the embellishment of contemporary architecture. It is most effectively applied if integrated into the fabric of the building achieved through collaboration between the artist and architect at the earliest stages of the building programme.

There is future work to be undertaken with the application of more efficient methods to design and produce architectural ceramics. This may be best achieved through liaison with the ceramic industries and the use of new technology.

APPENDICES

AppendixA: Chronological documentation of the Case Studies

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CASE STUDY 1; "Tree of Life"

11th July 1991

Meeting with the clients at Newcastle Polytechnic accompanied by the Percent for Art officer for Northumberland. Initial discussions about the project with suggestions put forward by the doctors as to their ideas and requirements for a ceramic feature for a new medical centre.

July / August

Compiling of information and imagery relating to medicine and the healing arts from historical and contemporary sources, also researching material on the history of the area with images relating to the now extinct coal industry.

13th September

Meeting with a representative of the client group at artist's studio/workshop to discuss initial drawings and the designs in progress, discussion about the suitability of materials to be used.

24th September

Meeting at the old medical centre with medical staff and doctors to discuss drawings and plans so far. Proposals using brick for the planted area and hand built ceramic for a central feature were the most popular; with the imagery based around the tree of life generally liked with various modifications to be considered according to suggestions put forward by the medical team. Percent for arts officer present to establish her role as mediator between client, artist and other parties involved and to finalise contractual details: timescale and funding for the proposed sculpture.

September /October

Modification of drawings and model making, research into materials to be used; clay bodies and glazes, suitable methods of manufacture and installation. Letters sent to brick and clay manufacturers in Tyne and Wear seeking material sponsorship and technical information.

October 8th

Meeting at local brick company with the technical manager to discuss the possibility of obtaining green bricks to make the sculpture and also technical advice on firing temperatures and construction methods.

November 27th

Collection of green bricks from the brickworks. meeting with the technical manager and the specials manager to discuss plans for the proposed sculpture and to discuss the best method of construction using the bricks.

November /December

Start test on the brick clay to determine the temperature and firing cycle necessary to produce a suitable colour and strength of brick for the sculpture. Also to test for the shrinkage of the brick between its raw, wet state and the size when fired over a temperature range of 1000° – 1130°C. Plans of the sculpture construction and scale drawings of the proposal and materials information sent for approval to architects.

December

Finalisation of proposal for sculpture by the doctors and architect. Start of construction and carving of brick structure as the retaining walls for planted area of the sculpture. Start of construction of the Tree of Life central feature.

January 1992.

Finishing of carving of brick walls. Dismantling and numbering of individual bricks; plans drawn up of layout for reassembly on site by brick- layer.

January 6th– 20th

Making of the central 'tree' feature, modelling and texturing of the surface to resemble layered 'fossilised' imagery.

January 13th– 20th

Testing of glazes for the 'tree' various temperatures over the range of 1200° – 1280°C.(stone-ware) all glaze experiments documented for future reference

January 15th

Site meeting at the new medical centre. Present were the architects the quantity surveyor and foreman of the construction company, the representing doctor and the arts officer to discuss plans, drawings,samples of brick and glazes,costings, installation and planting. It was established that the artist would act as sub - contractor to the main contractors and would be insured and paid by the university who would be responsible for raising the invoice to the construction company at the end of the project.

January 16th

Start drying the bricks in electric kiln; 150 degrees centigrade.

22nd January

First firing of bricks, overnight up to final temperature 1100 C

28th January

Firing inner skin of bricks, that lie behind the carved facing bricks. Drying of remaining bricks.

30th January

Final firing

18th February

Transport of bricks to site

21st February

Start of installation of the sculpture with sub-contracted bricklayer. Installation completed by the end of February.

6th March

First biscuit firing (980°C) of the 'tree' in four sections

12th March

Glaze firing of the "tree" dry stone ware glazes firing temperature 1280°C.

18th March

To site to re-point brick-work with red mortar (Topmix dark pink D153) and to clean brickwork.

19th March

Visit to a specialist herb growers to choose plants and to organise planting and delivery.

23rd March

Transport of tree sculpture to site. Gravel put into planting area.

31st March

Delivery of and planting of the herbs by herb suppliers

13th April

Installation of the tree sculpture.

15th June

Return to medical centre to repoint the sculpture and to discuss the delivery of explanatory drawings to tell patients the background of the project. Also to replace dead plants.

22nd September

Delivery of drawings and diagrams and photographs of the 1992 sculpture 'in progress'.

END OF CONTRACT

CASE STUDY TWO; TREE WALLS

February 1992

- The Cleveland region Public Arts Officer saw carved (Week 2) brick sculpture for another commission in progress. Informal meeting to discuss the possibility of carrying out another commission using carved brick or ceramic.
- Contact made between Public arts Officer and client to negotiate the feasibility and cost of commissioning site specific artwork for a new housing scheme. Also to establish the nature of imagery required.

(week 3)

- Formal meeting set up between the Public Arts officer and researcher to negotiate costs and timescale of the commission and to specify the artist's brief and requirements of the client.
- Site visit

(week 3-4)

- Research into imagery relating to trees and plants
- Design drawing
- Submission of designs to client for approval / criticism.
- Negotiation with brick company for material sponsorship; to supply bricks for the commission.

March 1992

Modification of designs and re-submission to the client

(week 1)

- Approval of designs
- Re-drawing of designs to show dimensions, layout and number of bricks.

(week 2)

Collection of green bricks from brick company

(week 2-3)

- Laying out of first brick panel on workshop floor
- Drawing out of design on the wet brick panel; Start carving panel 1

(week 3)

- Carving of panel 1
- Finish panel , dismantle and number

(week 4)

- Air drying of panel 1
- Laying out of second panel
- Start carving panel 2

April 1992

(week 1)

- Carving of panel 2
- Finish panel 2, dismantle and number
- Kiln drying and firing of panel 1

(week 2)

- Air drying of panel 2
- Unloading from kiln of panel 1
- Laying out of panel 3
- Carving of panel 3

(week 3)

- Firing of panel 2
- Finish panel 3, dismantle and number
- Delivery to site of panel 1

(week 4)

- Air drying of panel 3
- Delivery to site of panel 2

End of April/ May 1992

(week 1)

- Firing of panel 3
- Delivery to site of panel 3

8th May 1992 END OF CONTRACT

CASE STUDY THREE; PILLAR FOR THE ESTABLISHMENT

November 1st 1991

Briefing meeting with Dean of faculty, Project Manager, Head of sculpture, Head of business school, artist/ researcher. Arts Initiative introduced and proposal to commission a feature for the new stair well.

January-March 1992

Ongoing negotiations by the project manager with Arts 1992 funding bodies; for grants to fund asculpture and ornamental gates.

March

Decision taken to commission stairwell sculpture. The researcher asked to design and make a piece for the stairwell.

April 9th 1992

(week 1)

Meeting/ site visit; Discussions with architect as to envisaged nature of the feature; technical details, possible structures and installation.

(weeks 2-4)

Research into imagery appropriate to the commission; photography of parts of buildings, patterns, historical references.:Initial design; drawing from photographs.

May; (weeks 1-2)

Design drawing; to work out dimensions, structural details, appropriate materials for framework; aluminium, stainless steel, and ceramic panels

(weeks 3-4)

Start tests on materials; clay tests attempting to make panels as thin as possible to achieve translucency; Submission of plans & designs to architect and client for approval.

June (weeks1-2)

- Casting of plaster moulds, carved designs into plaster to form low relief images on clay panels. Mixed porcelain casting slip.
- Temperature and shrinkage tests. Colour trials.

(weeks 3-4)

- Casting of first full panels (50x50 cm). Test firing-1260 °
- Casting of latex sheets off the plaster moulds for printing on the reverse of the

panels.

- Tests for printing medium and oxide colour.

(week 4)

First results of test firings; most warped or cracked in cooling.

July (week 1)

- More tests, Changing recipe; increasing thickness; for strength; resulted in losing translucency

July 11th

Progress meeting with head of dept. and project manager

(weeks 2-4)

Making and firing of panels; the numbers being lost still very high. Therefore after consultation with the manager and with ceramics experts in Stoke-on-Trent, it was decided to use a white stone ware clay instead, sacrificing lightness for strength.

August (week 1)

Start tests on stoneware clay; changing of dimensions on the plans to compensate for less shrinkage in firing.

(weeks 2-3)

- Making of panels. Start making framework from aluminium channelling, mitring of corners and drilling and tapping of corners for joints. TIG welding joining rods to frames.
- Turning of aluminium spacers.

(week 4)

Fitting of first fired panels in frames; still slight warping in some, so replacements made.

September (week 1-2)

Last firings, fitting of framework to panels. Pop rivets used in joining the corners as the metal was too thin to take a screw thread.

Sept. 8th

Delivery to site, installation of piece. The panels were hung from an existing winch; the top first with the others joined on using nuts and bolts.

Steel cable used to hang the work and at a mid point and the bottom to tension the piece and for added safety.

Sept. 15th
Official opening of the building.
END OF CONTRACT

CASE STUDY FOUR: WADHAM COURT SUNDIAL

5th March 1991

Letter of introduction sent to a local architect through contact in the University, requesting information or views on the use of art within an architectural context.

21st June

Reply received from the architect outlining the possibility of a collaborative project and requesting the arrangement of a meeting.

5th August

Meeting with the architectural firm at their offices

Discussion regarding the nature of the commission. The architect went over the design concepts that lay behind his designs for a new sheltered housing scheme : the relationship between the layout of sixteenth century college buildings in Oxford as social and living spaces and communities and the necessity for similar buildings for modern contexts such as sheltered accommodation for the elderly. The architect saw the potential for the inclusion of ceramic details into the building; these would enhance focal points within the architecture; for example, string courses, windows, archways and a main doorway. The inclusion of decorative architectural details would, he felt be very much in keeping with the character of the building relating it strongly to buildings of its type from the sixteenth century.

August/ September

Initial design , drawing and research behind the project

16th September

Meeting with the architects with initial sketches and ideas.

Discussion about possible locations for the ceramic details; between window sills and lintels, (*ill.5.1*); at the springing of the entrance archway, (*ill .5.2*), or along the string courses at first floor level, (*ill.5.3*). (*see also plan 2*)

The possibility of incorporating some kind of detailing into the paving was also discussed.

4th October

Meeting at the housing association

Present were the Senior Architect; the Project Architect; the housing association's director; the Assistant Regional Director and the Development Officer.

- The purpose of this meeting was to introduce the proposed collaboration to the directors of the housing association. To determine whether they were prepared to

consider the inclusion of artwork into the new building and to fund the project: and if they agreed, to discuss possible ideas of imagery or style that should be considered in the design.

- The architect had already done much of the negotiation with the clients: the directors after seeing examples of other commissioned work, agreed to go ahead with the project with the proviso that designs be submitted to a future board meeting along with details of materials, proposed installation methods and 'reasonable' costing. These would be further considered before a final go-ahead was given.

The main indication of imagery to be considered was that the housing associations's logo, should be a feature of the design and that the designs should not obviously stem from a historical or nostalgic source; and should be in keeping with the ethos and themes behind the building's design.

November /January 1992

Design drawing.

Research into imagery associated with the area in which the sheltered housing was to be sited. Nothing definite could be decided in terms of materials, imagery, colour etc. at this stage as officially the project was still in negotiation until the idea was put to a full board meeting at the housing association. The architects were also just putting out the arrangement regarding contracts, payment and timescales could be reached.

20th January 1992

Pre- contract meeting at the Housing Association.

Present were representatives from all the parties involved with the commission; architects, housing association officials, building contractors and quantity surveyors. The main purpose of the meeting was to hand over contracts so that building work could begin and also to take the opportunity to introduce the plan of the inclusion of artwork into the project to the contractors who would be responsible for installing the work and to discuss contracts.

Minutes from the meeting part 3.8;

"Works by artist"

" Eleanor Wheeler, Sculptress, was introduced to the contractor and the nature of her contribution to the project described. The parts of the building where her work is to be incorporated have been identified in the drawings. The decision to 'build in' certain items will be taken once the contractors programme is available."

The main discussion with the contractors was to reassure them about the proposed brick details; the materials, making methods and proposed means of installation; ie.. to be built into the brick work as it was being built. The contractors were somewhat reluctant about this idea as they felt that the details might be damaged easily. Samples of fired brick and ceramic were shown to the contractors to illustrate the type of material that would be involved, and that it would not be easily damaged.

It was decided that costs would be included in the brick budget and identified as a specialist sub-contraction and be included in the contractors bill at the end of the contract. Regarding the nature of the details, their imagery and positioning within the building, it was arranged that decisions and contacts with the client would be made via the architects.

27th January

Start date for main building work on the housing scheme to commence

4th February

Details received of the contractors programme the brick work was due to be started from mid- April and be completed by the end of September.

May/ June

Modelling of masters for the ceramic panel details Casting of the masters in plaster of Paris. Themes chosen; water,cogs, fish, plants, fossils all in combination with a castellated design taken from the housing association's logo.

22nd June

Meeting with the architects to discuss the time- scale of the installation of the ceramic details;

- It had been decided by the contractors to install the ceramic details into the brickwork once it was completed to prevent any possibility of damage. Bricks had been temporarily placed in the spaces for the ceramic panels to prevent water entering the wall cavity; these would be then removed when the panels came to be installed later on in the contract.
- The architects had also decided that the panels would be best placed at intervals along the string courses above and below the first floor windows. This would make them fit in better with the overall scheme, both visually and from a practical point of view when installing.
- Drawings of the brick details and doorway and sundial completed for the architect to be included in a presentation drawing of the building for the housing association.

July 2nd

Start on Site meeting and party

July / August

- Casting of the ceramic panels using Raku clay.
- Test firings of clay with porcelain slip
- First biscuit firings

September/ October

- Pressing, drying and biscuit firing of panels
- Test stone ware glazes

16th November

Site visit with Project Architect to measure up the site of the sundial and surrounding brick panels for the doorway.

November/ December

- Completion of the ceramic panels, glazing, firing and delivery to site.
- Preparation of the clay for the doorway panels.
- Making of clay blocks to be carved.(appen.2.8)
- Finalising of the designs for the sundial and ordering of metal and fixings.

4th - 15th January 1993

Making of the brick clay blocks for the doorway panels using fifteen inch square wooden formers. I had decided to use brick clay which had been reclaimed from another earlier project. When soaked down in water and then wedged to remove air on plaster of Paris batts, it formed a soft plastic mud consistency which could then be easily formed in either wooden or plaster of Paris moulds.

Test carving and firing of the clay. The blocks when allowed to dry slightly to a leather hard state was easily carved using wooden and wire hand tools and responded well to texture. When fired to 1140 °C it had the same qualities as any clay or brick, slightly porous with a variation of oatmeal buff to pink tone.

18th-27th

Carving of the clay blocks top section (excluding panels running down the side of the doorway)

28th January - 4th February

Drying out of the carved panels

5th - 11th

Firing of the panels

12th February

I had hoped to display the unglazed to section of the doorway in a "work in progress" exhibition on 15th Feb. However on opening the kiln that morning I was greeted by an avalanche of what looked like 'hardcore' for land fill; this was in fact the remnants of the doorway panels which had spectacularly blown up during the firing.

The bricks had blown up at an early stage of the firing as the were pieces of raw brick lying at the bottom of the kiln. This must have been due to lack of sufficient drying, firing too fast and in some of the bricks there were obvious air pockets. At this point a local brick company came to the rescue by agreeing to supply brick blocks in an 'oatmeal buff' clay to use instead.

Feb. / March

Design and model panels to be cast for the sides of the doorway.

I decided to make these sections out of press moulded panels as the dimensions did not match those of the brick blocks without necessitating the use of many joints. They were made and cast in the same way as the small ceramic wall panels and were to be modelled in such a way as to represent the flutes going up the length of a classical column; ribbed in order to give a visual sense of moving upward to try and draw the eye up to the sundial and top panels.

8th March

Collection of "green" (unfired) bricks from brickworks.

9th March- 8th April

Laying out of the bricks on the studio floor, drawing out design and carving.

Tests on glazes for the columns and the bricks as well as making the sections of the columns. There was also small tiles needed to run along the inside 'return' of the doorway frame; these were pressed out of plaster moulds and glazed.

14th-16th April

Glazing and firing of the column sections- the doorway panels needed some kind of frame to visually hold the panels apart from the surrounding wall and to there fore emphasise the doorway more strongly; I decided with consultation with the architect to design and make beading to runaround the edge of the panels. This was drawn from the type that was traditionally used on late Victorian Terra cotta buildings.

19th -22nd April

First firing of the brick clay panels; 1130° c

22nd-23rd

Empty kiln and reload for second firing; 1130°C

26th-30th

First glaze firing 1060° C and further biscuit firing

3rd -7th May

Firing of the beading;

Glazing and firing of the tiles

Glazing and firing of bricks

7th May

Delivery to site of the first section of glazed bricks; arch bricks; column panels and tiles.

10th May

Final glaze firings

Meeting with the project architect to decide on colour of mortar. As the predominant colour of the brick panels was honey colour ranging up to a mahogany brown, we decided to choose a neutral pale brown colour for the mortar rather than leaving it naturally grey or choosing a darker tone; both of which could well have dominated and emphasised the grid pattern of the brick blocks and detracted from the overall design. The area underneath and around the position of the sundial was a turquoise blue to contrast with the honey colour ; it seemed however too distracting to start trying to match the blue to the mortar.

11th May

Start on site to meet brick layers and discuss fixing of bricks and the sundial. The bricklayer started by trying to build the column panels up the wall without the use of wall ties due to their weight this became precarious and potentially dangerous after only three courses (approximately three foot high) and so I decided that it would be necessary to resin galvanised steel wall ties to the backs of each panel and brick using glass fibre resin and blanket the wall ties would subsequently be screwed into the wall and so securing each panel before mortaring in the joints.

13th May

Final delivery of bricks to site.

Delivery of coloured sand for mortar mix

17th -21st May

Start installation of the brick panels. After all the panels had had wall ties glued on, the whole panel had to be laid out in a vacant flat in the order of installation; once done, there was very little that I could contribute to the installation and the brick layers finished the installation in approximately four days.

Some bricks around the archway needed to be cut as the brick work was slightly uneven at the sides of the arch. The piece had to be built in sections each day to allow the mortar to set sufficiently to support the next layer.

24th May

Finish glazing of beading

24th May

Delivery of sundial to site

26th May

Site meeting at the sheltered housing scheme; to inspect the progress of the ceramic details. By this stage all the small panels and the doorway panels had been installed all that remained to be completed was the installation of the beading around the doorway and the sundial itself.

2nd June

Installation of the sundial; using resin anchor bolts

Delivery of the last pieces of beading.

15th June

End of contract.

Photography of completed commission

8th November

Official opening ceremony of Wadham Court Housing Scheme

END OF CONTRACT

GLOSSARY OF SPECIALIST TERMS

Batt (bat)	Applied to sheets of material e.g. slab of plaster for drying clay, kiln shelves, removable disc of wood fastened to wheel head
Biscuit/blisque	First low firing of clay -960-1000° C in order to produce a porous surface for glazing. Unglazed ware, usually porous
Brick bonds	The layering of bricks for maximum strength. Different bonds can also be used effectively to create different patterns. (e.g. Centenary Square)
Cast	Making of forms by pressing clay / pouring slip into moulds
Casting slip	Clay slip with a lower than normal water content through the addition of chemical defloculants- soda ash and sodium silicate
Clay Body	A blend of clay, minerals and other non plastic ingredients making up a workable clay for pottery use
Courses	The layers / brick rows making up the construction of a brick wall
Falence	Glazed terracotta within an architectural context
Grog	Pre fired clay ground down and added to clay to decrease shrinkage, improve even drying and strength.
Leather hard	Partially dry clay no longer plastic; suitable for carving relief.
Majolica	Low firing (1060°C) white tin glaze as used in Spanish and Islamic pottery and tiles. Usually over painted with bright colours.
Raku body / Craft crank	Coarse heavily grogged stoneware clay bodies suitable for large scale hand built work
Stains	Stabilised colouring oxides used for colouring clay and glazes
Stoneware	High firing clay body so called because it fires to a non porous stone-like quality. Vitrification temp: 1260-1300
Terracotta	Literally means "baked earth"; a low firing red clay Within the context of architectural ceramics, this not only refers to red clay but to ceramic facing in buildings generally.
Y'material	Highly grogged white plastic clay suitable for large scale work

**PAGE
NUMBERING
AS ORIGINAL**

MATERIALS / GLAZE RECIPES

Case Study 1 Tree of Life

Dry Glaze - 1260-80° C (cone 9) reduction

Base: Calcium Borate Frit...2
 Whiting... 26
 Feldspar Potash... 30
 China Clay... 42
 + Bentonite... 1%

Colouring oxide additions:

1. Green/moss Cobalt carbonate... 1.25%
 Iron oxide... 4%
 Rutile... 1%

2. Slate grey Cobalt carbonate... 1.25%
 Cobalt oxide... 1%
 Manganese... 4%

3. Light blue Copper carbonate... 15
 Cobalt oxide... 0.25%
 Soda ash... 10%

Slip/underglaze Manganese dioxide... 50
 Iron oxide... 50

Bronze - 1260° C oxidation/reduction
 Manganese dioxide... 90
 Copper carbonate... 10

Notes

The bricks were stacked on top of one another, as opposed to using shelves, allowing room for air to circulate.

The main section was placed together before glazing to ensure consistency of colour.

Title **Case Study 2: Tree Walls (1992)**

Materials Brick (Redlands Victoria Buff)

Colour Buff/oatmeal

Texture Coarse

Shrinkage 10%

Firing 1 Single firing to 1130°C (oxidation) Brick clay tested within the range of 900-1200°C with optimum temp and vitrification at 1130-50°C

Making Bricks laid out in panels to the actual finished size of the walls and in stretcher bond. Carved using metal hand tools when leather hard: Stage 1-drawing onto clay panels; Stage 2- carving rough forms; Stage 3- refining carving.

Glaze No glaze

Firing 2 Single firing

Notes The bricks were carved end on to give as large an area unbroken by mortar joints as possible. Their was no need to allow space for the mortar when carving as the shrinkage allowed for a 10mm joint. Their was a slight discrepancy in fired colour depending on where the bricks were in the kiln, this was unnoticeable once installed.



Case Study 3 Pillar for the Establishment

Slip cast porcelain panel

- porcelain casting slip mix

12 kg Potclays HF porcelain

Sodium silicate

Soda ash

Water

- Coloured slip

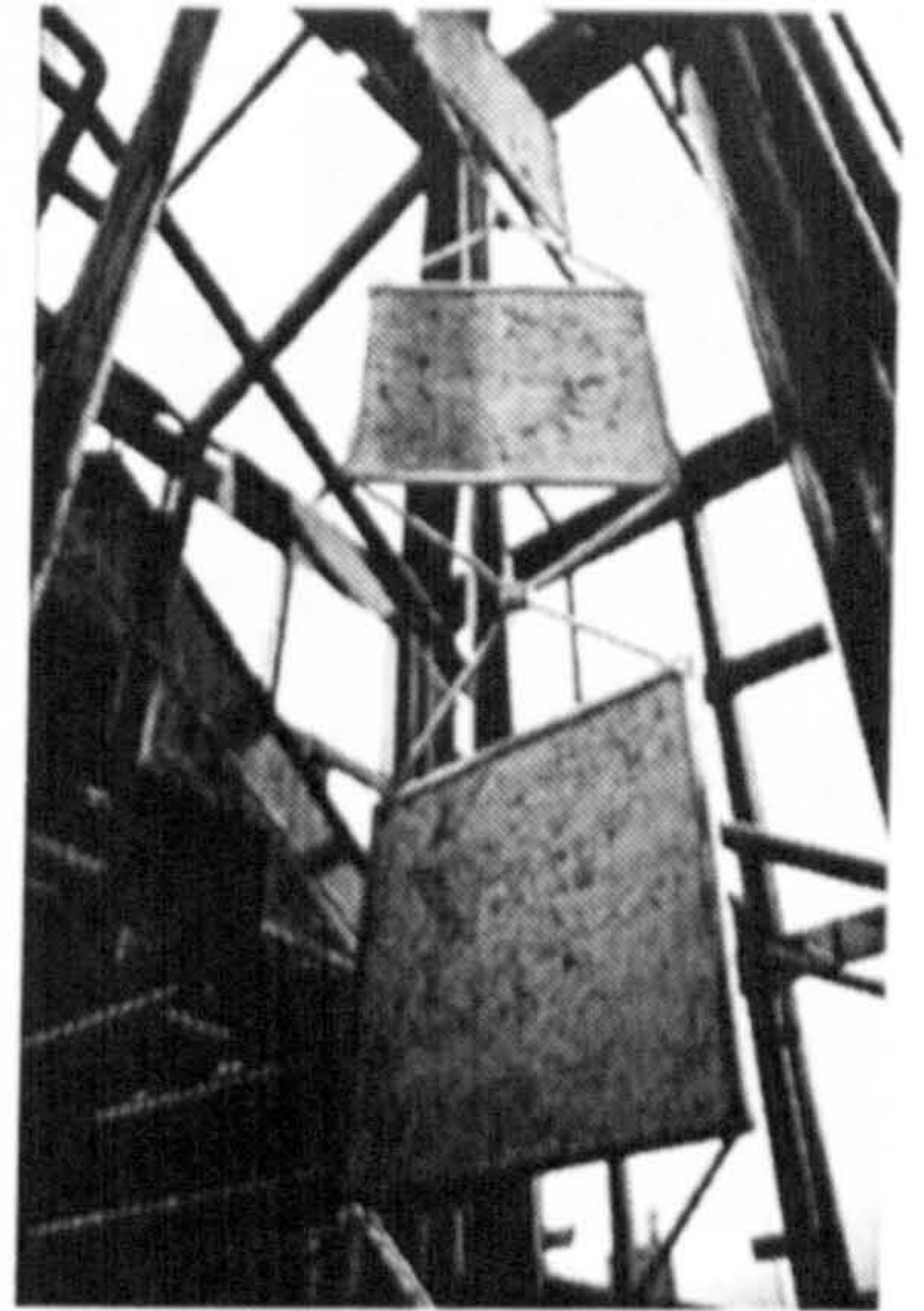
Porcelain powder... 100%

Body / underglaze stain... 7%

Feldspar potash... 10%

Applied to bone dry panels and rubbed
back with steel wool

*Health and safety- wear a mask and use extraction



- Black printing pigment

Manganese dioxide...50

Iron oxide...50

Water based printing medium (Rowney System 3)

With roller apply to latex sheets and press lightly into leather hard clay


Plaster mix

6-8 pint mix @ 1 1/2 lb plaster / pint of water

(British Gypsum "Potters plaster")

Latex

Ready mixed 4 lt (K&C Mouldings)

Title	Case Study 3: Pillar for the Establishment (1992)		
Materials	Porcelain, 'Y' material, aluminium, steel cable and fixings		
Colour	White with coloured highlights, monochrome printing		
Texture	Smooth		
Shrinkage	14%		
Firing 1	Once fired: 1280°C oxidation		
Making	<p>Panels: slip cast onto plaster panels producing low relief, with same pattern printed on the reverse in black oxide. When bone dry, underglaze colour and iron oxide was sponged onto the relief and rubbed back using fine steel wool to reveal the clay underneath. Some panels were pressed from plastic clay (Y material) for strength.</p> <p>Frames: aluminium channelling riveted together and welded to rod; joined together with turned aluminium washers.</p>		
Glaze	No glaze. Use of underglaze colour for highlights and iron/manganese oxides in a water based printing medium (system 3) fro monochrome pattern.		
Firing 2	Single Firing		
Notes	The porcelain was highly susceptible to warping and breaking, therefore some of the panels were made from stoneware (Y material) for speed. With hindsight, the addition of nylon fibre to the slip would have significantly strengthened the panels.		
Title	Case Study 4: Wadham Court Sundial. (1992-93)		
Materials	Brick blocks, stoneware clay (Craft Crank), terracotta for models		
Colour	Buff brick with yellow and turquoise glaze		
Texture	Coarse		

Shrinkage	10%
Firing 1	<p>Biscuit firing of small panels to 1000°C</p> <p>Doorway panels & tile to 1260°C</p> <p>Bricks fired to top temp. 1130–40°C</p>
Making	<p>The small panels, door columns and beading were modelled in terracotta and cast in plaster forming moulds. Stoneware clay (Crank) pressed into moulds with supporting walls. Once biscuit fired, washed with iron/manganese to emphasise relief. Tiles were pressed into etched plaster slabs to produce low relief.</p> <p>Brick blocks laid out to actual size with arch cut from a template. Arch bricks cut individually. Carved when leather hard.</p>
Glaze	<p>Oxide wash over bricks to emphasise relief. Glazes similar to traditional Victorian using iron, manganese, cobalt and copper in alkaline and lead based glaze bases.</p> <p>Clear stoneware glazes on small panels, again using colouring oxides.</p>
Firing 2	<p>Bricks fired to 1060°C oxidation</p> <p>Clay panels to 1260°C oxidation</p> <p>Doorway and tile panels to 1060°C oxidation</p>
Notes	<p>The brick blocks blew up in the first firing because they were slightly damp and their larger size did not allow the carbons in the clay to burn off efficiently. The back of blocks had to be carved out and the firing schedule changed to allow the temperature to be held at 900°C for 3 hours to allow the carbons to burn off. There is a potential health hazard from the sulphur dioxide given off during firing causing chest and throat irritation.</p>

Case Study 4:

Wadham Court Sundial

- Glazes
- Moulded bricks

Base:

Cornish stone... 85

Whiting... 15

Bentonite... 1%

Oxide additions

- | | |
|------------------------|--|
| 1. Honey | 5-10% iron oxide |
| 2. Blue/green | Cobalt carbonate... 0.5-2%
Copper Carbonate... 1-5% |
| 3. Glaze stains | Cossack green, Turquoise, Purple... 6% |

Underslips (applied at biscuit stage)

- | | |
|-----------------|---|
| 1. Black | Manganese dioxide... 50
Iron oxide... 50 |
| 2. Blue | Ball clay... 25
China clay... 25
Red iron... 25
Cobalt oxide... 25 |

Glazes for bricks (Adapted from Cooper, 1989)

- | | |
|-----------------------------|---|
| 1. Turquoise 1060° C | Lead bisilicate... 25
Alkaline frit... 70
Whiting... 3
Bentonite...2
+ Copper carbonate... 2.5-6%
+ Cobalt carbonate... 1% |
| 2. Honey 1060° C | Lead bisilicate... 79
Whiting... 6
China Clay... 15
+ Iron oxide... 3-10% |
| 3. Black Underslip | Manganese dioxide... 50
Iron oxide... 50 |

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